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ORIGINAL: SPANISH

A NEW PUSH FOR REGIONAL INFRASTRUCTURE DEVELOPMENT IN SOUTH AMERICA

INTER-AMERICAN DEVELOPMENT BANK

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This study was undertaken in response to a request from the government of Brazil that the Inter-American Development Bank support the analysis of infrastructure integration in South America at the level of the region's highest authorities. The request was made in light of the convening of the Meeting of South American Presidents in Brasilia on 31 August and 1 September 2000.

The study newly reaffirms the IDB's commitment to the development of regional infrastructure as a key to the competitiveness of the South American countries, and to the consolidation of integration and cooperation processes in the region.

It is the outcome of a combined effort by a group of IDB professionals from the Department of Integration and Regional Programs, and from Regional Operations Departments 1 and 3. The team responsible for the study consisted of: Robert Devlin, Deputy Manager of the Department of Integration and Regional Programs; Anneke Jessen, Integration Officer of the Integration, Trade and Hemispheric Issues Division; Jaime Sujoy, Senior Advisor to the Manager of Regional Operations Department 1; Peter Zassenhaus Zoll, Senior Specialist in Transport in the Division of Finance and Basic Infrastructure of Regional Operations Department 3; and Juan José Taccone, Director of the Institute for the Integration of Latin America and the Caribbean (INTAL) of the Department of Integration and Regional Programs, who coordinated the study. A valuable technical contribution was made by the consultancy firm Booz, Allen & Hamilton.

We are grateful to various institutions in the region that provided the technical information used in preparing the study, and are particularly thankful for the support given by the LAIA, the CAF and ECLAC.

It should be noted that the study does not include a specific analysis of infrastructure financing, since a document on that issue is currently being prepared. That document will focus in particular on innovative financing instruments that promote the private sector's active participation in investment in the energy, transport and telecommunications sectors.

ABBREVIATIONS LIST

AADT	Annual Average Daily Traffic
CACM	Central American Common Market
CAF	Andean Development Corporation
CAN	Andean Community
CARICOM	Caribbean Community
CARIFTA	Caribbean Free Trade Area
CIER	Integration Commission for Regional Electricity
ECLAC	Economic Commission for Latin America and the Caribbean
FDI	Foreign Direct Investment
FONPLATA	Financial Fund for the Development of the River Plate Basin
G-3	Group of Three
INTAL	Institute for the Integration of Latin America and the Caribbean
LAC	Latin America and the Caribbean
LAIA	Latin American Free Trade Association
MERCOSUR	Southern Common Market
NAFTA	North American Free Trade Agreement
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

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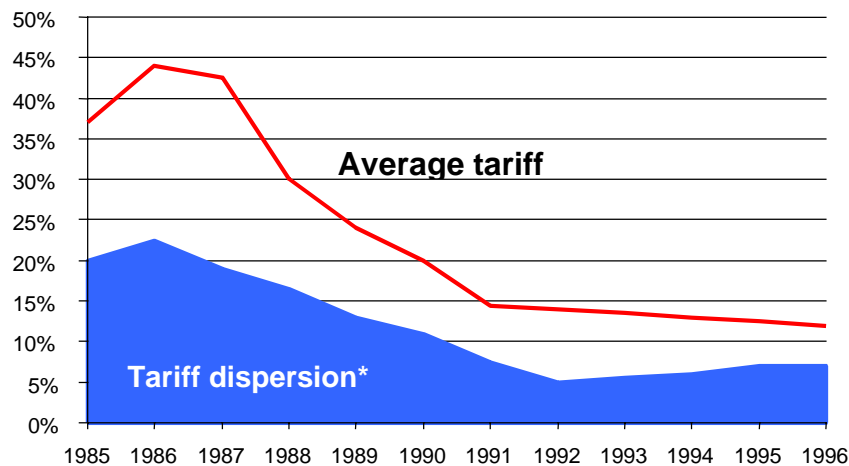
CHAPTER I

NEW REGIONALISM IN LATIN AMERICA AND THE CARIBBEAN

Globalization and Regionalism

- 1.1 In the 1990s, the centrifugal forces of increasing economic globalization were matched by the centripetal forces of regionalization. World trade grew much faster than world output (UNCTAD, 2000); the ambitious Uruguay Round ended successfully; and membership in the World Trade Organization (WTO) rose to record numbers. There was also unprecedented growth in world financial markets and foreign direct investment flows, the latter probably exceeding one trillion dollars (UNCTAD, 2000).
- 1.2 In parallel to these global trends, there was an upsurge in new integration initiatives. In fact, by the end of the 1990s practically all the members of the WTO had concluded one or more regional agreements (WTO, 1995). Studies have shown that, while moving in apparently opposite directions, the forces of globalization and regionalism actually reflect complementary dimensions of the dynamic development of the capitalist market (Oman, 1998).
- 1.3 The Latin American and Caribbean region well exemplifies these twin forces. Between the mid-1980s and the 1990s, the region unilaterally reduced its average tariff from more than 40 percent to 12 percent (see Figure 1-1). The region also participated actively in the Uruguay Round, and by the end of the decade all Latin American and Caribbean countries (except the Bahamas) were members of the WTO. The countries of the region also opened up their capital accounts. In parallel to this generalized opening there was a wave of new reciprocal trade and integration accords, more than twenty in all, with many more in various stages of development (see Table 1-1).
- 1.4 In the 1990s these trends were accompanied by a sharp average growth in the region's international trade, especially imports. The latter grew in value by 18 percent a year, and stood at US\$280 billion at the outbreak of the Asian crisis. This was almost 50 percent faster than the growth of extra-regional exports. The ratio of extra-regional imports to GDP also grew from 21 percent at the end of the 1980s to 34 percent in 1997. The region, moreover, became a significant emerging client of the international financial markets, and a notable recipient of foreign direct investment. In 1999 the region was almost on a par with Asia as the leading target of such investment among developing countries (UNCTAD, 2000).

Figure 1-1
Evolution of Tariffs and their Dispersion in South America



*Statistical dispersion (standard deviation)

Source: Department of Integration and Regional Programs - IDB

- 1.5 There was also a marked upswing in regional circumstances. Intra-regional trade (and related investment) were very dynamic: intra-regional exports grew faster than extra-regional sales, such that the former's share in total exports grew from 12 percent in 1990 to almost 20 percent by the end of the decade. This regional trend heightened commercial interdependence between many neighboring countries, and in several cases fostered more synchronized economic cycles between regional trade partners. It also induced various kinds of regional cooperation. 1999 was a difficult year for regional integration and trade, which contracted sharply (see Tables 1-2 and 1-3) because some effects of the shocks in the world economy were transmitted to the region. Preliminary data, however, suggest that trade and its intra-regional component were substantially reactivated in 2000.

Table 1-1
Reciprocal Preferential Agreements
in Latin America and the Caribbean in the 1990s

Agreement	Date
Caribbean Community (CARICOM) ¹	1989
Chile-Mexico ²	1991
Central American Common Market (CACM) ³	1990
Chile-Venezuela	1993
North American Free Trade Agreement (NAFTA) ⁴	1992
Colombia-Chile	1993
Southern Common Market (MERCOSUR)	1991
Costa Rica-Mexico	1994
Group of Three (G-3)	1994
Bolivia-Mexico	1994
Chile-Ecuador	1994
Andean Community ⁵	1988
Chile-MERCOSUR	1996
Bolivia-MERCOSUR	1996
Canada-Chile	1996
Mexico-Nicaragua	1997
CACM-Dominican Republic ⁶	1998
CARICOM- Dominican Republic ⁶	1998
CACM-Chile ⁶	1999
European Union-Mexico	2000
Mexico-Israel	2000
Mexico-Northern Triangle (El Salvador, Guatemala, Honduras)	2000

SPECIFIC AGREEMENTS UNDER DISCUSSION

Regional

Free Trade Area of the Americas; Canada-Costa Rica; Mexico-Panama; CACM-Panama; Northern Triangle-Andean Community

Extra-regional

European Union-MERCOSUR; European Union-Chile; Chile-South Korea; APEC, Mexico-Japan

Source: Division of Integration, Trade and Hemispheric Issues of the IDB's Department of Integration and Regional Programs.

Notes:

1. CARICOM began its reform process in 1989 (Declaration of Grand Anse) and agreed to launch a harmonized CET in 1990.
2. The two countries substantially revised and reordered this agreement in a treaty that entered into force on 1 August 1999.
3. The presidents agreed on the CACM in 1990 (Montelima Summit), and decided to pursue a customs union in 1993 (Guatemala Protocol).
4. Preceded by a free trade area between the United States and Canada in 1987.
5. In 1988, in the Quito Protocol, the presidents agreed to amend the constitutive treaty of the Andean Group and to change the existing tariff reduction program. In 1996, they officially agreed to change the name of the Andean Group to the Andean Community, and to reform some of the existing institutional structures (Declaration of Trujillo).
6. Awaiting sufficient legislative approval.

The New Regionalism

- 1.6 Regional integration in Latin America and the Caribbean is not new. On the contrary, since independence the region's history has been replete with such initiatives, most of which were originally spurred by political considerations (Townsend, 1988). In the

postwar period, however, economic development became the central aim of regional initiatives. Within this tradition, South America has been a significant source of thought and practice on postwar integration and economic cooperation. Some of the earliest initiatives based broadly on regional economic integration originated in the South American countries. The Latin American Free Trade Association, later the LAIA, included all the Spanish- and Portuguese-speaking countries of South America, while Guyana was a founding member of the Caribbean Free Trade Area (CARIFTA) and then the Caribbean Community (CARICOM). At the same time, the Andean countries sought deep integration in an historic initiative that found expression in the Cartagena Agreement. Although none of these early postwar integration efforts wholly met their ambitious goals, they prepared the ground for the greater success that followed.

- 1.7 The 1980s debt crisis and the ensuing balance of payments problems prompted a deep recession in Latin America and the Caribbean, with a sharp contraction in imports. Since intra-regional imports are the flipside of intra-regional exports, the economic collapse in Latin America and the Caribbean also induced a fall in trade within the region and sparked a crisis in the weakened formal integration agreements. To some observers, general economic paralysis in the region, coupled to the emergence of a new development strategy based on market opening, real relative prices and privatization/deregulation, seemed to be the final blow to regional integration. To the surprise of many, however, new regional initiatives emerged in the second half of the 1980s and there was a true resurgence in the 1990s.
- 1.8 The recent regional economic initiatives, however, are very different from those of the past. In fact, the regionalism of the 1990s is often termed New Regionalism to distinguish it from the early postwar initiatives (Ethier, 1998). As mentioned earlier, regionalism as such is not new for Latin America and the Caribbean; the novel features of the recent regional initiatives lie in their ends and means.
- 1.9 In line with its instrumental function, regional integration's aim in Latin America has altered with the new general strategy for development. In essence, the New Regionalism of the 1990s is an integral part of the widespread structural reforms pursued in Latin America since the mid-1980s. The main features of the current strategy include an opening to world markets, fostering private initiative, the state's withdrawal from direct economic activity, and its enhanced role in oversight, promotion and social protection.
- 1.10 The link between the New Regionalism and structural reform is most evident in trade liberalization. Regional integration is the third plane of a three-level process whose first two stages are the unilateral and multilateral openings mentioned earlier. Governments have used regional integration to demonstrate their enduring commitment to liberalization when additional unilateral opening is neither feasible nor desirable, and when multilateral, reciprocal initiatives are in transition - as has been the case since the end of the Uruguay Round. Figure 1-2 illustrates how the New Regionalism has worked in coordination with unilateral and multilateral opening in MERCOSUR.
- 1.11 In this context, the political economy of regional integration has become a third crucial level of the liberalization that has helped give the process constant momentum. The fiscal implications of preferential liberalization among Latin American neighbors are

less onerous because, usually, the trade volumes are initially small for historical reasons, and also because of the legacy of national protection.¹ Among both those of a free market tendency and those who advocate more protectionist practices, the internal consensus on regional opening is facilitated by the fact that competition occurs within a confined and familiar market in which competition is often more symmetrical than in the international arena.

- 1.12 Furthermore, regional opening has the redeeming feature of reciprocity, thus fostering a potentially more balanced mix of short-term costs and benefits. In sum, regional integration is now used as an effective policy instrument for furthering liberalization, lessening protection still further, strengthening competition, and deepening such liberalizing commitments by means of mandatory rules and the pressure of partners in the regional agreements.²
- 1.13 A trade accord is clearly positive -spawning a gain for the importing country, non-member countries and the world as a whole- when it creates new trade for the member countries. By contrast, there is a welfare loss when the trade arising from the agreement substitutes trade with third countries that produce at lower costs; in such a case the only beneficiary is the exporting country. Such gains and losses, known as trade creation and diversion, spring from a change in the sources of supply of goods and services. The change might be toward exporters with lower or higher costs.
- 1.14 This issue, however, admits no categorical assertions. There is a chance that the market growth induced by the agreement might allow economies of scale to be exploited. A country that previously had high production costs might thus be able to cut them gradually, to the point that it produces at lower costs than the rest. A situation of trade diversion could thereby become one of trade creation.

¹ See Table 2 in Devlin and Estevadeordal (2000).

² For a detailed analysis see Devlin and Estevadeordal (2000).

Table 1-2
Western Hemisphere: Total and Intra-regional Exports
(in US\$ millions and percentages)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average annual growth	
											1991-98	1991-99
Western Hemisphere (1)												
Total exports	662,996	689,766	732,116	770,348	865,118	1,002,256	1,069,683	1,176,450	1,165,416	1,216,389		
% growth	7.9	4.1	6.2	5.3	12.2	15.9	6.7	10.0	-0.9	4.4	7.3	7.0
Extra-hemispheric exports	345,739	361,699	368,425	370,191	399,649	477,594	498,454	522,966	491,348	489,839		
% growth	5.4	4.6	1.9	0.5	7.8	19.8	4.4	4.9	-6.0	-0.3	4.5	3.9
Intra-hemispheric exports	317,274	328,068	363,691	400,157	465,468	524,673	571,230	653,484	674,067	726,550		
% growth	10.7	3.4	10.9	10	16.3	12.7	8.9	14.4	3.1	7.8	9.9	9.6
<i>Intra/Total</i>	<i>48.1</i>	<i>47.8</i>	<i>49.9</i>	<i>52.2</i>	<i>34.1</i>	<i>52.6</i>	<i>53.4</i>	<i>55.5</i>	<i>57.8</i>	<i>59.7</i>		
Latin America and the Caribbean (LAC) ⁽²⁾												
Total exports	142,543	141,013	150,379	160,481	181,573	225,200	247,092	273,599	270,793	281,744		
% growth	10.5	-1.1	6.8	7	16.7	20.6	9.7	10.7	-1.0	4.0	8.4	7.9
Extra-LAC exports	125,636	120,557	125,070	130,297	151,920	182,601	207,474	226,934	224,686	238,204		
% growth	10.9	-4.3	3.8	4.4	16.3	20.9	13.6	9.4	-1.0	6.0	7.5	7.4
Intra-LAC exports	16,924	20,456	25,410	30,184	35,585	42,608	45,916	53,099	52,436	43,541		
% growth	7.3	22.1	24.3	19.3	18.1	19.4	7.8	15.6	-1.2	-17.0	15.2	11.1
<i>Intra/Total</i>	<i>11.9</i>	<i>14.7</i>	<i>11.1</i>	<i>19</i>	<i>19.3</i>	<i>19.1</i>	<i>18.6</i>	<i>19.4</i>	<i>19.4</i>	<i>15.5</i>		
Andean Community (CAN)												
Total Exports	31,605	28,630	28,390	29,654	34,256	38,843	45,687	47,651	38,742	43,207		
% growth	26.1	-9.4	-0.9	4.5	13.5	13.4	17.6	4.3	-18.7	11.5	2.6	3.5
Extra-CAN exports	30,310	26,912	26,224	26,858	30,952	34,268	40,996	42,025	33,401	39,268		
% growth	26.2	-11.2	-2.6	2.4	14.9	11.1	19.6	2.5	-20.5	17.6	1.2	2.9
Intra-CAN exports	1,295	1,719	2,156	2,796	3,404	4,575	4,691	5,627	5,341	3,939		
% growth	23.5	32.7	25.4	29.7	21.7	34.4	2.5	19.9	-5.1	-26.2	19.4	13.2
<i>Intra/Total</i>	<i>4.1</i>	<i>6</i>	<i>7.6</i>	<i>9.4</i>	<i>9.9</i>	<i>11.8</i>	<i>10.3</i>	<i>11.8</i>	<i>13.8</i>	<i>9.1</i>		
CARICOM												
Total Exports	4,762	4,771	4,875	4,837	5,933	6,211	7,246	7,451	7,488	n.a.		
% growth	6.3	0.2	2.2	-0.8	22.7	4.7	16.7	2.8	0.5	n.a.	5.8	n.a.
Extra-CARICOM exports	4,224	4,308	4,408	4,286	5,346	5,407	6,298	6,434	6,329	n.a.		
% growth	4.9	2	2.3	-2.8	24.7	1.1	16.5	2.2	-1.6	n.a.	5.2	n.a.
Intra-CARICOM exports	555	463	467	551	587	815	948	1,017	1,159	n.a.		
% growth	23.3	-13.9	0.8	19.1	6.5	38.9	16.3	7.3	14.0	n.a.	9.6	n.a.
<i>Intra/Total</i>	<i>11.7</i>	<i>9.7</i>	<i>9.6</i>	<i>11.4</i>	<i>9.9</i>	<i>13.1</i>	<i>13.1</i>	<i>13.6</i>	<i>15.5</i>	<i>n.a.</i>		
Central American Common Market (CACM)												
Total Exports	4,058	4,138	4,697	5,065	5,509	6,864	7,778	8,242	10,313	11,175		
% growth	12.7	2	13.5	7.9	9.9	24.6	13.3	6.0	25.1	8.4	12.4	11.9
Extra-CACM exports	3,402	3,356	3,697	3,961	4,290	5,408	6,192	6,417	8,125	8,886		
% growth	12.4	-1.3	10.1	7.1	8.1	26.4	14.5	3.6	26.6	9.4	11.5	11.3
Intra-CACM exports	656	782	1,000	1,105	1,229	1,456	1,586	1,826	2,188	2,289		
% growth	14.6	19.1	27.9	10.4	11.3	18.4	8.9	15.1	19.9	4.6	16.2	14.9
<i>Intra/Total</i>	<i>16.2</i>	<i>18.9</i>	<i>21.3</i>	<i>21.8</i>	<i>22.3</i>	<i>21.2</i>	<i>20.4</i>	<i>22.1</i>	<i>21.2</i>	<i>20.5</i>		
MERCOSUR												
Total Exports	46,425	45,911	50,561	54,162	62,112	70,401	74,998	82,342	81,323	74,320		
% growth	-0.3	-1.1	10.1	7.1	14.7	13.3	6.5	9.8	-1.2	-8.6	7.3	5.4
Extra-MERCOSUR exports	42,302	40,808	43,341	44,132	50,157	56,018	57,960	62,289	60,971	59,157		
% growth	-1.2	-3.5	6.2	1.9	13.7	11.7	3.5	7.5	-2.1	-3.0	4.7	3.8
Intra-MERCOSUR exports	4,123	5,102	7,220	10,031	11,955	14,394	17,038	20,053	20,351	15,163		
% growth	10.8	23.8	41.5	38.9	19.2	20.3	18.4	17.7	1.5	-25.5	22.1	15.6
<i>Intra/Total</i>	<i>8.9</i>	<i>11.1</i>	<i>14.3</i>	<i>18.5</i>	<i>19.2</i>	<i>20.4</i>	<i>22.7</i>	<i>24.4</i>	<i>25.0</i>	<i>20.4</i>		
G-3												
Total Exports	65,162	65,117	67,451	74,367	86,020	107,625	129,114	144,612	145,249	168,328		
% growth	22.2	0.9	36.1	10.3	17.1	23.8	20.0	12.0	0.4	15.9	10.5	11.1
Extra-G-3 Exports	64,127	63,937	65,675	72,023	83,456	104,319	125,988	140,591	141,338	165,449		
% growth	15.5	-0.3	2.7	9.7	15.9	25	20.8	11.6	0.5	17.1	10.4	11.1
Intra-G-3 Exports	1,035	1,180	1,776	2,344	2,565	3,306	3,125	4,021	3,911	2,879		
% growth	47	14	50.4	32	9.4	29.9	-5.5	28.7	-2.7	-26.4	18.1	12.0
<i>Intra/Total</i>	<i>1.6</i>	<i>1.8</i>	<i>2.6</i>	<i>3.2</i>	<i>3</i>	<i>3.1</i>	<i>2.4</i>	<i>2.8</i>	<i>2.7</i>	<i>1.7</i>		
NAFTA												
Total Exports	561,164	591,440	627,933	661,752	738,494	856,598	918,045	1,013,088	1,012,082	1,071,347		
% growth	7.8	5.4	6.2	5.4	11.6	16	7.2	10.4	-0.1	5.9	7.7	7.4
Extra-NAFTA exports	320,667	341,997	354,468	360,444	396,434	461,079	485,789	517,587	491,046	486,482		
% growth	5.2	6.7	3.6	1.7	7.2	19.3	5.4	6.5	-5.1	-0.9	5.5	4.7
Intra-NAFTA exports	240,497	249,443	273,465	301,308	352,060	395,520	432,256	495,501	521,036	584,864		
% growth	11.5	3.7	9.6	10.2	16.9	12.3	9.3	14.6	5.2	12.3	10.1	10.4
<i>Intra/Total</i>	<i>42.9</i>	<i>42.2</i>	<i>43.6</i>	<i>45.5</i>	<i>47.7</i>	<i>46.2</i>	<i>47.1</i>	<i>48.9</i>	<i>51.5</i>	<i>54.6</i>		

Source: DATAINTAL.

⁽¹⁾ Western Hemisphere includes Latin America and the Caribbean, Canada and the United States

⁽²⁾ Latin America and the Caribbean includes Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay and Venezuela. CARICOM is not included in 1999.

Table 1-3
Western Hemisphere: Total and Intra-regional Imports
(in US\$ millions and percentages)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average annual growth	
											1991-98	1991-99
Western Hemisphere ⁽¹⁾												
Total imports	741.167	764.816	839.082	917.264	1,053.228	1,180.072	1,257.708	1,429.229	1,486.949	1,526.800		
% growth	5.5	3.2	9.7	9.3	14.8	12.0	6.6	13.6	4.0	2.7	9.1	8.4
Extra-hemisphere imports	441.148	440.707	479.287	518.746	592.154	661.253	679.294	767.419	809.026	811.127		
% growth	4.8	-0.1	8.8	8.2	14.2	11.7	2.7	13.0	5.4	0.3	7.9	7.0
Intra-hemisphere imports	300.018	324.109	359.795	398.518	461.075	518.819	578.414	661.809	677.923	715.673		
% growth	6.5	8.0	11.0	10.8	15.7	12.5	11.5	14.4	2.4	5.6	10.7	10.1
<i>Intra/Total</i>	<i>40.5</i>	<i>42.4</i>	<i>42.9</i>	<i>43.4</i>	<i>43.8</i>	<i>44.0</i>	<i>46.0</i>	<i>46.3</i>	<i>45.6</i>	<i>46.9</i>		
Latin America and the Caribbean (LAC) ⁽²⁾												
Total imports	104.474	135.064	161.659	182.307	212.372	245.812	269.852	335.105	342.066	292.463		
% growth	13.4	29.3	19.7	12.8	16.5	15.7	9.8	24.2	2.1	-14.5	16.0	12.1
Extra-LAC imports	87.155	114.169	135.486	152.350	177.477	203.409	220.845	277.710	281.709	248.290		
% growth	14.3	31.0	18.7	12.4	16.5	14.6	8.6	25.7	1.4	-11.9	15.8	12.3
Intra-LAC imports	17.318	20.896	26.173	29.957	34.895	42.403	49.006	57.395	60.357	44.173		
% growth	8.8	20.7	25.3	14.5	16.5	21.5	15.6	17.1	5.2	-26.8	16.9	11.0
<i>Intra/Total</i>	<i>16.6</i>	<i>15.5</i>	<i>16.2</i>	<i>16.4</i>	<i>16.4</i>	<i>17.3</i>	<i>18.2</i>	<i>17.1</i>	<i>17.6</i>	<i>15.1</i>		
Andean Community (CAN)												
Total imports	17.109	20.865	26.411	28.846	30.613	38.243	38.953	45.349	46.862	35.175		
% growth	2.6	22.0	26.6	9.2	6.1	24.9	1.9	16.4	3.3	-24.9	13.4	8.3
Extra-CAN imports	16.006	19.302	24.323	26.226	27.326	33.424	34.041	40.025	41.216	31.080		
% growth	1.1	20.6	26.0	7.8	4.2	22.3	1.8	17.6	3.0	-24.6	12.6	7.7
Intra-CAN imports	1.103	1.563	2.088	2.620	3.287	4.819	4.912	5.324	5.646	4.095		
% growth	31.5	41.7	33.6	25.5	25.5	46.6	1.9	8.4	6.0	-27.5	22.6	15.7
<i>Intra/Total</i>	<i>6.4</i>	<i>7.5</i>	<i>7.9</i>	<i>9.1</i>	<i>10.7</i>	<i>12.6</i>	<i>12.6</i>	<i>11.7</i>	<i>12.0</i>	<i>11.6</i>		
CARICOM												
Total imports	8.452	9.474	9.376	10.557	8.995	10.597	13.002	13.085	13.725	n.a.		
% growth	-3.9	12.1	-1.0	12.6	-14.8	17.8	22.7	0.6	4.9	n.a.	6.2	-63.4
Extra-CARICOM imports	7.957	8.965	8.879	9.864	8.613	10.180	11.973	11.968	12.452	n.a.		
% growth	-4.3	12.7	-1.0	11.1	-12.7	18.2	17.6	0.0	4.0	n.a.	5.8	-63.1
Intra-CARICOM imports	494	509	496	693	383	418	1,029	1,116	1,273	n.a.		
% growth	4.0	3.0	-2.5	39.6	-44.8	9.1	146.4	8.5	14.0	n.a.	12.6	-49.8
<i>Intra/Total</i>	<i>5.8</i>	<i>5.4</i>	<i>5.3</i>	<i>6.6</i>	<i>4.3</i>	<i>3.9</i>	<i>7.9</i>	<i>8.5</i>	<i>9.3</i>	<i>n.a.</i>		
Central American Common Market (CACM)												
Total imports	6.517	6.696	8.625	10.067	11.041	13.691	13.941	16.562	19.374	18.047		
% growth	5.3	2.8	28.8	16.7	9.7	24.0	1.8	18.8	17.0	-6.9	14.6	12.0
Extra-CACM imports	5.887	5.933	7.567	8.921	9.694	12.096	12.239	14.611	17.150	15.672		
% growth	6.0	0.8	27.5	17.9	8.7	24.8	1.2	19.4	17.4	-8.6	14.3	11.5
Intra-CACM imports	630	763	1,058	1,146	1,347	1,595	1,702	1,951	2,224	2,374		
% growth	-0.7	21.2	38.6	8.4	17.5	18.4	6.7	14.6	14.0	6.7	17.1	15.9
<i>Intra/Total</i>	<i>9.7</i>	<i>11.4</i>	<i>12.3</i>	<i>11.4</i>	<i>12.2</i>	<i>11.7</i>	<i>12.2</i>	<i>11.8</i>	<i>11.5</i>	<i>13.2</i>		
MERCOSUR												
Total imports	31.594	36.677	40.760	51.621	63.688	79.432	88.931	105.708	103.423	79.796		
% growth	13.9	16.1	11.1	26.6	23.4	24.7	12.0	18.9	-2.2	-22.8	16.0	10.8
Extra-MERCOSUR imports	27.124	31.229	33.224	41.835	51.238	65.054	71.029	84.157	81.259	64.378		
% growth	14.8	15.1	6.4	25.9	22.5	27.0	9.2	18.5	-3.4	-20.8	14.7	10.1
Intra-MERCOSUR imports	4.469	5.448	7.536	9.786	12.451	14.378	17.902	21.552	22.164	15.418		
% growth	8.4	21.9	38.3	29.9	27.2	15.5	24.5	20.4	2.8	-30.4	22.2	14.8
<i>Intra/Total</i>	<i>14.1</i>	<i>14.9</i>	<i>18.5</i>	<i>19.0</i>	<i>19.5</i>	<i>18.1</i>	<i>20.1</i>	<i>20.4</i>	<i>21.4</i>	<i>19.3</i>		
G-3												
Total imports	41.679	64.864	81.156	86.446	99.565	97.516	114.741	139.897	137.443	166.038		
% growth	20.2	55.6	25.1	6.5	15.2	-2.1	17.7	21.9	-1.8	20.8	16.1	16.6
Extra-G-3 imports	40.844	63.778	79.516	84.224	97.052	94.172	111.368	135.596	133.018	162.912		
% growth	19.8	56.2	24.7	5.9	15.2	-3.0	18.3	21.8	-1.9	22.5	15.9	16.6
Intra-G-3 imports	835	1,086	1,641	2,222	2,513	3,344	3,373	4,301	4,426	3,126		
% growth	44.5	30.1	51.1	35.4	13.1	33.1	0.9	27.5	2.9	-29.4	23.2	15.8
<i>Intra/Total</i>	<i>2.0</i>	<i>1.7</i>	<i>2.0</i>	<i>2.6</i>	<i>2.5</i>	<i>3.4</i>	<i>2.9</i>	<i>3.1</i>	<i>3.2</i>	<i>1.9</i>		
NAFTA												
Total imports	666.708	679.619	739.552	800.322	920.202	1,006.712	1,077.327	1,203.932	1,251.486	1,376.399		
% growth	5.2	1.9	8.8	8.2	15.0	9.4	7.0	11.8	3.9	10.0	8.2	8.4
Extra-NAFTA imports	445.159	439.296	475.543	507.831	576.527	627.521	655.191	724.259	755.596	810.387		
% growth	4.9	-1.3	8.3	6.8	13.5	8.8	4.4	10.5	4.3	7.3	6.8	6.9
Intra-NAFTA imports	221.549	240.323	264.009	292.491	343.675	379.191	422.137	479.673	495.890	566.012		
% growth	6.0	8.5	9.9	10.8	17.5	10.3	11.3	13.6	3.4	14.1	10.6	11.0
<i>Intra/Total</i>	<i>33.2</i>	<i>35.4</i>	<i>35.7</i>	<i>36.5</i>	<i>37.3</i>	<i>37.7</i>	<i>39.2</i>	<i>39.8</i>	<i>39.6</i>	<i>41.1</i>		

Source: 1990 to 1998: IMF, Direction of Trade Statistics; 1999: DATAINTAL.

⁽¹⁾ Western Hemisphere includes Latin America and the Caribbean, Canada and the United States

⁽²⁾ Latin America and the Caribbean includes Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay and Venezuela. CARICOM and the Dominican Republic are not included in 1999.

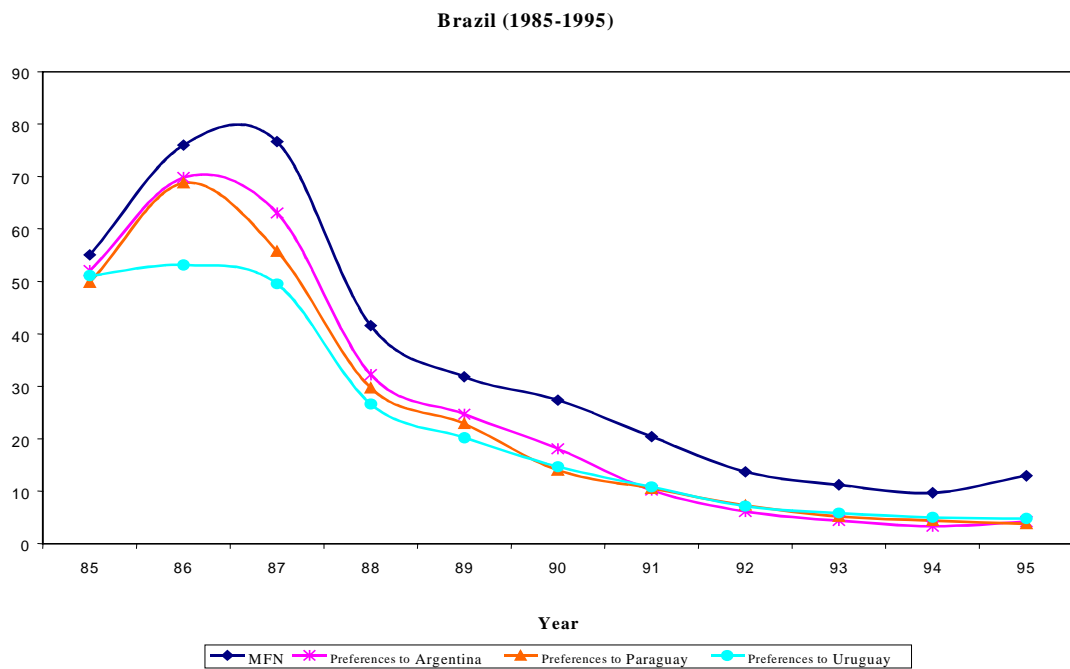
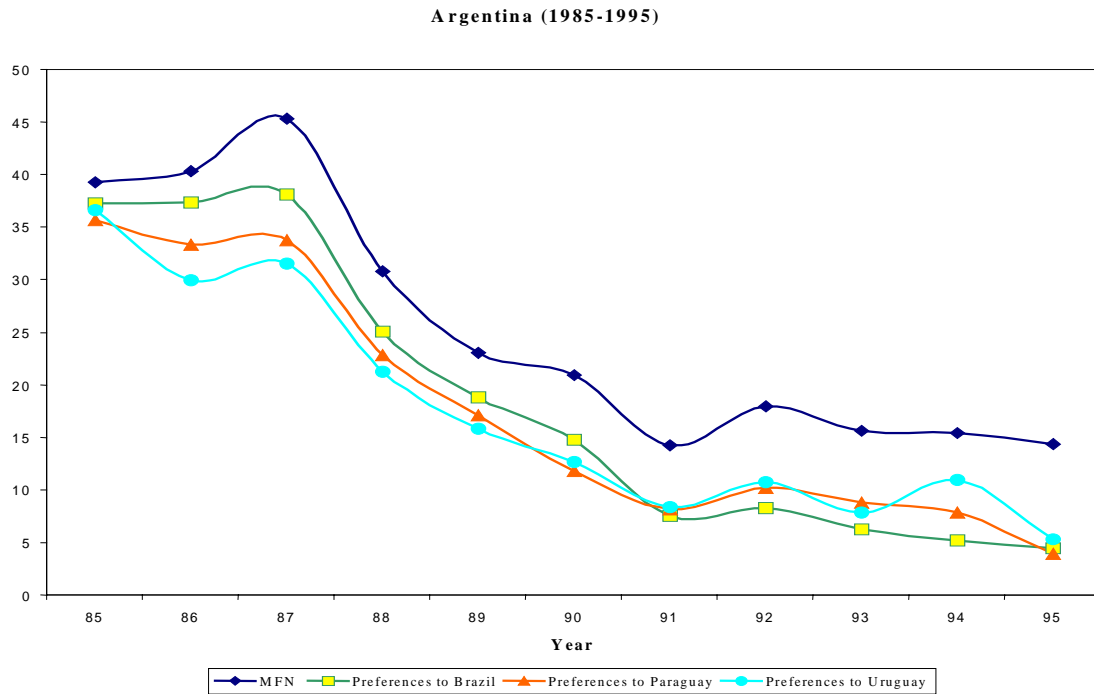
- 1.15 Analysis of the gains should therefore not be limited to their static effects, but should also cover their possible dynamic consequences. There is evidence to suggest that the medium- and long-term (dynamic) gains can be significantly greater than the immediate (static) gains: in the case of European integration, the former might be several times greater than the latter.³
- 1.16 In the region's present policy circumstances, characterized by opening up, competition and structural reform, the New Regionalism is fostering significant developments in the real economy. These enhance the prospect of capturing the dynamic effects of the changes wrought by the regional agreements:
- Foreign direct investment (FDI). In an age of globalization there is fierce international competition for foreign direct investment and its attendant know-how, technology and export markets. In the process of global competition for such capital, New Regionalism and the creation of regional markets as a "registered trademark" is being used as an effective means of distinguishing the partner countries from others in the world (Ethier, 1998). The efforts of the Andean Community and MERCOSUR countries to attract FDI have been underpinned by their regional agreements.
 - New exports and investment. As regards international markets, the sharp growth of exports within regions reflects a diversified product structure, a greater share of differentiated manufactures based on knowledge, on greater specialization and on the expansion of economies of scale through intra-industrial trade, investment and the movement of other production factors within and across national borders in regional markets.⁴ In fact, there is evidence that national and foreign firms have reoriented their marketing, investment and strategic alliances in order to exploit growing regional markets.⁵ Regional trade in some sectors, such as dairy products and textiles, has proven a welcome opportunity in light of the high levels of protection in international markets. Dynamic transformation effects are nurturing more competitive economies that are better placed to face the challenges of globalization.

³ For a detailed analysis see Corbo (2000).

⁴ It is illustrative that by the mid-1990s, the share of manufactured goods in intra-zone trade was considerably higher than its share of total trade. Note, for example, the Andean Community (63 percent against 21 percent) and MERCOSUR (61 percent against 48 percent). See IDB (1999).

⁵ For an analysis that grasps some of the sectoral dynamic effects of regional integration in Latin America, see Hasenclever *et al* (1999); Nofal and Wilkinson (1999); Tigre, Laplane, Lugones and Porta (1999); Echavarría (1998); and Gereffi and Martínez (1999).

Figure 1-2
Evolution of External and Internal Tariffs in selected MERCOSUR Countries



Source: Estevadeordal, A., J. Goto and R. Saez (2000)

1.17 New Regionalism offers other benefits to the structural reform process.

- Geopolitical factors. Outward orientation in Latin America and the Caribbean has increased demand for a more active and strategic participation in hemispheric and world fora. Regional integration has made the countries more effective global players. In the Free Trade Area of the Americas process, for example, MERCOSUR, the Andean Community and CARICOM each negotiate as a single bloc, and thereby have a greater impact on the negotiations. Regional integration and trade have also helped democratic countries to secure peace on their borders, thus ending a history of military conflict. Integration has moreover established a solidarity network (through democratic clauses) to protect the region's still young democracies. The experiences of the enlarged MERCOSUR, as well as of Ecuador and Peru in the Andean Community, usefully illustrate these latter two considerations. Borders that were previously conflict-ridden are now peaceful, with a substantial level of traffic, while the Andean and MERCOSUR countries work together to overcome real threats to the consolidation of democratic regimes within their groupings.
- Regional cooperation. The development of regional markets creates interdependencies that endogenously increase demands to deepen regional integration and cooperation between and among neighbors.⁶ The expansion of regional markets creates pressures to address problems in such areas as the environment, migration, violence, macroeconomic stability and the balance of payments, epidemiological matters, customs, border crossings and other issues. Market deepening and interaction at border crossings also increase demands for regional infrastructure development and for more general and integral approaches to the socioeconomic affairs of border communities, especially those featuring a high degree of trade interaction.

New Regionalism, South America and Regional Infrastructure

1.18 In light of the foregoing it is clear that regional integration upholds many of the region's development goals. Regional integration and cooperation, however, are always challenging. South America's early postwar efforts at regional economic integration faced a number of severe obstacles. Fortunately, many such hurdles have been substantially overcome in recent years. Structural economic reform -which the IDB has very actively supported- has made the region's economies more receptive than previously to regional integration through the development of more stable macroeconomic environments, the dramatic unilateral opening of economies (Table 1-4), the sharp decline in the state's direct intervention in the markets, and the more encouraging atmosphere for private sector initiative. In fact, since they embody the commitment to

⁶ The importance of trade and of deepening the regional market as an impetus to regional integration is mentioned in Devlin, Estevadeordal, Giordano, Monteagudo, Sáez (2000).

liberalization and reform, regional integration initiatives are currently more credible for the private sector and have a stronger potential for change and for regional dissemination effects. A common commitment to democracy and peace on the region's borders has greatly reinvigorated the conditions for regional integration and cooperation.

Table 1 - 4
Evolution of Average Tariffs (in percent)

Country/Year	1990	1998	2000
Argentina	20.9	13.9	13.7
Bolivia	9.7	9.7	9.7
Brazil	30.2	14.6	14.1
Chile	15.0	11.6	9.0
Colombia	15.0	10.9	11.6
Ecuador	32.9	15.5	17.7
Paraguay	16.9	11.5	11.6
Peru	25.9	13.5	13.5
Uruguay	27.7	12.2	12.4
Venezuela	17.6	11.9	12.3
South America	22.88	12.53	12.56

Source: IDB

- 1.19 South America is a significant player in the new wave of regionalism. The Andean countries restarted their integration process at the end of the 1980s and deepened their commitment during the 1990s. Guyana participated in and revitalized CARICOM at approximately the same time, and saw neighboring Suriname accede to the group. Meanwhile, MERCOSUR was created at the beginning of the 1990s and both Chile and Bolivia later became associate members. A series of bilateral agreements were concluded within and beyond the continent (see Table 1-1).
- 1.20 Despite the substantial progress made in promoting regional integration and cooperation, the complete potential of the continent is far from being exploited. South America is an important pole of growth and development in the world economy. It is extremely rich in natural resources, with a diversified climate and long stretches of coast on the Pacific and Atlantic oceans, as well as in the Caribbean Sea. More than three hundred million people of rich cultural diversity live and work in an area of 18 million square kilometers, with a GDP of 1.5 trillion dollars. The countries of South America also have important historical, commercial and political ties with the main industrial centers of Europe and North America, and increasingly with Asia.

- 1.21 Although export markets within the continent's sub-regions have grown substantially in recent years, trade volumes remain low relative to what might be expected between neighbors with relatively open economies and preferential trade agreements. Trade and investment have grown markedly in the formal subregions (before the Asian crisis, for example, intra-subregional exports within MERCOSUR and the Andean Community stood at 25 and 12 percent of total exports, respectively), but there is relatively little trade and investment between these two large subregional markets: just 4-5 percent of exports from MERCOSUR and the Andean Community go to the other grouping. Trade and investment between the two subregions and their South American neighbors in CARICOM, Guyana and Suriname is even lower.
- 1.22 In the context of globalization, of the current WTO negotiations, and of the prospect of the Free Trade Area of the Americas in 2005, there is an urgent need to combine South America's comparative advantages in natural, human and financial resources to compete successfully abroad and to develop the whole region. A series of obstacles must be overcome if the complete potential of the subregional and continental markets is to be exploited. One such obstacle is the consolidation of a transparent, rules-based system in the regional agreements, which is crucial for attracting long-term private investment, for exports, and for regional marketing activity. Another challenge is expanding the agreements among neighbors. An encouraging development in this context is the Brasilia Communiqué issued by the South American Presidents, which calls for a free trade accord between MERCOSUR and the Andean Community by January 2002 at the latest, and for a broad range of trade and regional cooperation in the continent. There is also a need to eliminate non-tariff barriers within and between the integration schemes, and to make regulatory frameworks as compatible as possible.
- 1.23 Another crucial requirement is the development of regional infrastructure, which for many decades was hampered by the barriers that stem from the continent's geography. Unfortunately, therefore, it has not received due attention to date. The progress of science and technology, however, now offers great opportunities to exploit the opportunities of geography, which can no longer be viewed as an insurmountable obstacle.
- 1.24 In recent years, structural economic reforms such as regional integration have furthered significant progress in regional infrastructure development. Opening up economies to neighbors has increased the demand for regional infrastructure, and has simultaneously improved the supply response of the public and private sectors. There is greater willingness on the part of local and foreign capital to support infrastructure development. Much, however, remains to be done. Trade, investment and the movement of people are still obstructed, and sometimes deterred, by the severe physical, legislative and social barriers at borders and in the main intra- and interregional trade corridors. Socioeconomic development in South America's regional markets has not fulfilled its potential, partly because there is no shared strategic vision of how to use cooperation and regional planning as a means of fully exploiting the benefits of a continental network of regional infrastructure.

Infrastructure for Integration

- 1.25 Infrastructure covers a set of engineering projects, equipment and installations with a long effective life that are used by the productive sectors and by households. Its definition is somewhat vague, and traditionally it has been related to the public capital stock or to certain technical or economic features, such as its link with basic services, its high investment costs, its indivisibility, its immovable nature or its character as a public good.⁷ Growing private participation in the provision of infrastructure, technological innovation and an inclusive approach to sustainable development are now prompting a broader vision of infrastructure.
- 1.26 Infrastructure can usually be divided into several groups according to its function: (i) economic infrastructure (transport, energy and telecommunications); (ii) social infrastructure (dams and irrigation channels, drinking water and sewage systems, education and healthcare); (iii) environmental infrastructure; and (iv) infrastructure linked to information and knowledge. It can also be categorized according to its geographical coverage, with a distinction between urban, interurban and international infrastructure.
- 1.27 Viewed in terms of integration between countries, only some infrastructure (that which supports flows between the countries of a bloc) is of a regional nature. Other forms of infrastructure support only internal flows (within a single country) or external flows (linking that country with the world beyond the bloc). On that conceptual basis, this study concentrates on the basic economic infrastructure of transport, energy and telecommunications, and on those elements that facilitate flows between the countries of the region. Such infrastructure comprises the set of installations and services that are shaded in Table 1-5.

Table 1-5

Types of Infrastructure: By Function and Geographical Coverage

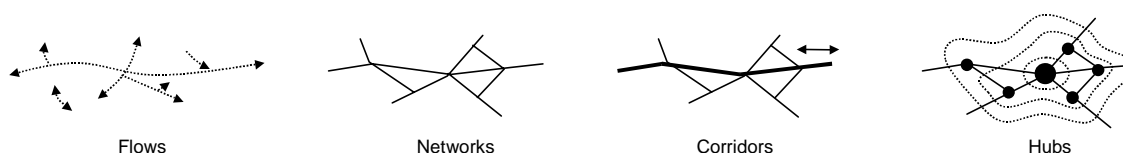
SECTORS/TYPES	URBAN	INTER-URBAN	INTERNATIONAL
TRANSPORT	Urban road network, railway lines	Highways, railways, navigable rivers, airports, ports	Ports, airports, highways, navigable rivers, railways
ENERGY	Electricity and gas distribution networks, generating plants, transformer stations	Transmission networks, gas pipelines, compressor plants, oil and gas production centers, electricity generators	Transmission networks, gas pipelines, oil pipelines
TELECOMMUNICATIONS	Fixed and cellular telephony networks	Optic fiber networks, microwave antennae, satellites	Satellites, submarine cables
SOCIAL DEVELOPMENT	Hospitals, schools	Dams and irrigation channels, hydraulic networks	-
ENVIRONMENT	Parks and urban spaces	Parks, nature reserves, protected land, ecotourism routes	Parks, nature reserves, shared ecotourism routes
INFORMATION AND KNOWLEDGE	Networks, buildings, cable television	Distance learning systems, portals, open television, satellites	Networks

Source: IDB

⁷ For a discussion of this issue and its problems, see Kessides (1996) and Button (1996).

- 1.28 Geographical interaction gives rise to flows that do not circulate freely within the area in general, but do so through infrastructure networks. For that reason, the flows analyzed here are those of goods, people, information, electricity, gas and oil. The movement of these flows, circulating through the infrastructure networks, tends to be consolidated in certain sections, thereby forming corridors. At the regional level -and to the extent that these corridors advance the economic and social development of the areas through which they pass- they can become true integration and development hubs, a powerful means of underpinning the organization of the territory.

Figure 1-3
Flows, Networks, Corridors and Hubs



From P. Haggett, *Locational Analysis in Human Geography*, IDB Adaptation

- 1.29 Infrastructure networks provide the physical facilities through which the flows move. Their mere existence, however, does not ensure that they meet the goals for which they were designed. A series of public norms, drawn up and enforced by various institutions, govern their use. These legal and institutional frameworks, as well as the way in which services work, are as important as physical infrastructure itself for their contribution to economic development and to improved living standards among the people they serve.⁸
- 1.30 Table 1-5 classifies the various kinds of infrastructure by function and geographical coverage. In practice, however, services of differing geographical scope share segments of the infrastructure networks. Note, for example, that vehicles connected with interurban and international services travel on the same road; domestic and international air services may operate at the same airport; and local and international data can move on the same optic fiber network. It will be seen throughout this document that regional integration flows (that is, those linking the countries of South America) are rarely channeled through specific infrastructure, but instead use networks that are shared with domestic flows and with flows that link the countries of the region with the rest of the world.
- 1.31 On MERCOSUR's roads, for example, where international cargo traffic is concentrated, such traffic is small relative to total road traffic. In Argentina, on National Route 7 between La Paz and Desaguadero, this share fluctuates between 12 percent and 14 percent. The proportion only increases as the road approaches the border, and when the total annual average daily traffic (AADT) falls markedly. On the roads of southern Brazil, used by the trucks that link the country with Uruguay, Argentina and Chile, the

⁸ Kessides (1996) makes a solid argument in this respect.

share of trucks connected to international trade is less than 15 percent of the AADT. A similar pattern holds for the road linking Colombia and Venezuela.

Infrastructure and Regional Development

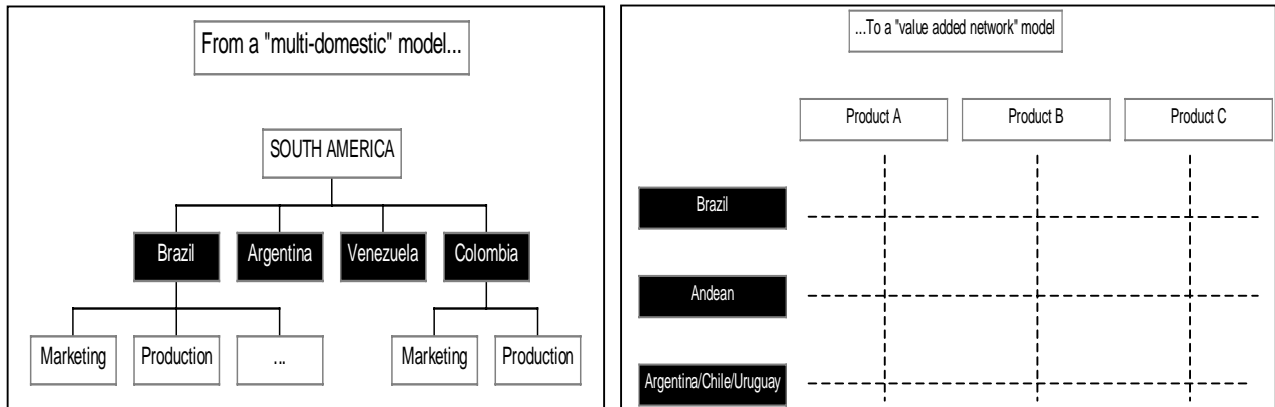
- 1.32 The link between infrastructure and regional development has been the subject of broad debate. The relationship is obvious, since countries and regions with a greater endowment of infrastructure generally display greater economic development. The causal link between them, however, is not as clear as is often thought, particularly since investment tends to target more economically developed regions.⁹
- 1.33 There is nevertheless a broad consensus that the provision of infrastructure boosts the productivity of economic actors and improves the population's quality of life; that this effect is substantially stronger in regions of relatively lesser development; and that its true impact springs not from the mere building of public works but from various concomitant factors. Prominent among the latter are: (i) that the services provided meet real demands; (ii) that their provision is matched by proper management; (iii) that the new projects are accompanied by other sectoral policies that consolidate demand; and (iv) that the provision of various kinds of infrastructure allows exploitation of the synergies that might be generated between them.

Private Sector Responses

- 1.34 With the creation of regional economic areas, bigger companies (multinationals and large South American corporations) have sought to redefine their business models and to adopt a new geographical approach. The previous model, which might be termed "multi-domestic", entailed organizing all the company's functions in each country in which it operated. The new model, facilitated by the improved prospects for trade between countries, allows companies to organize themselves as a network in which they maximize value added, concentrating their functions in particular locations.
- 1.35 Such specialization allows them to exploit economies of scale, and is one of the main benefits of trade (see Krugman, 1991). This change in the spatial configuration of company activities spurs an appreciable increase in flows between the companies' various sites in different countries of the region: flows of finished products, parts, people, information, etc.

⁹ For more on this issue, see World Bank (1994), Kessides (1996), Button (1996), and Banister and Berechman (2000).

Figure 1-4
Change in the Spatial Configuration of Large Corporations' Business Models



- 1.36 Small and medium-sized companies have also changed the spatial configuration of their activities in response to greater opening and integration. One such change is the tendency to form clusters - geographical concentrations of interconnected companies, specialized suppliers, and associated firms and institutions that simultaneously compete and cooperate. They are thereby able to exploit economies of agglomeration and substantially boost their competitiveness (Porter, 1998).
- 1.37 In sum, policies of economic opening and regional integration change how firms operate in geographical terms. Companies organize their activities to enhance efficiency, and in that process they increase demand for flows of trade, passengers, information, etc. This prompts growing demand pressure on the infrastructure facilities that support the movement of those flows.

The Role of the State and Planning

- 1.38 As mentioned earlier, the changes in the region's economies during the 1990s included shifts in the traditional models of providing infrastructure and attendant services, which were previously characterized by almost exclusive state participation. These changes have posed a challenge in terms of the new role to be assumed by the public sector, basically as regards regulation, planning and the financing of infrastructure and its services. While the issue prompts debate, there is a growing consensus that the state should be adapted to the new circumstances (ILPES, 1999).
- 1.39 Planning seems essential in those sectors where there are clear "market failings" such as externalities, economies of scale and indivisibilities that hinder market responses. These "failings" make state planning advisable, but in an indicative sense. The new circumstance can be understood as a paradigm shift in the state's role in infrastructure planning in the region. As is evident in the table below, indicative planning is matched by a more inclusive vision of sustainable development, and by participative decision-making.

Table 1-6
Toward a New Paradigm of Infrastructure Planning

TRADITIONAL PARADIGM	PROPOSED PARADIGM
➤ Regulatory planning, direct state management	➤ Indicative planning, regulation, public and private management
➤ Based on induced demand (supply driven)	➤ Based on real and potential sustainable demand (demand driven)
➤ Oriented to the public sector	➤ Oriented to the public and private sectors
➤ Isolated projects	➤ Synergy between projects, bundling
➤ Mitigate environmental effects	➤ Create opportunities for environmental preservation
➤ Economic development	➤ Broad sustainable development
➤ Decisions imposed on the community	➤ Mechanisms for community decision-sharing

1.40 Viewing geographic space as a defining feature of integration, this new paradigm aims for infrastructure investment to make investment in infrastructure to provide effective and sustainable results for regional development. From the perspective of integration between nations -and no longer as an instrument of national planning- this approach not only facilitates corridors through which to channel flows, but also real development hubs for the communities of the region's countries. This requires that national planning be substantially coordinated at its various stages of identifying, devising, assessing and following up on projects.

1.41 The vision of infrastructure planning proposed here can be summarized as follows:¹⁰

“It is worth stressing that infrastructure’s contribution to regional growth and quality of life, broadly acknowledged in economic theory, spring not only from the mere existence or creation of physical installations but also from making them work efficiently and from the value derived by users of the services generated by those facilities”.

“Although efficient resource-allocation should stem to a greater degree from private markets, governments should retain an active role in managing those markets and ensuring -through intervention in investment planning, regulations and financing- that the objectives of growth, equity, environmental sustainability and macroeconomic stability are attained”.

¹⁰ Taken from Christine Kessides (1996), pp. 213-214.

CHAPTER II

THE GEOGRAPHICAL STRUCTURE AND DISTRIBUTION OF FLOWS

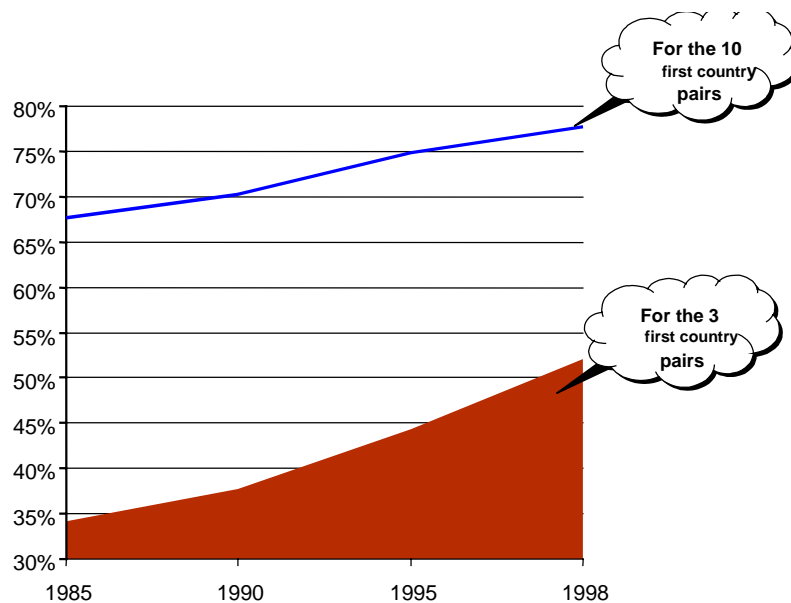
- 2.1 The trend of growing intra-regional trade in South America mentioned in the previous chapter was matched by a marked concentration. The countries with the highest share of intra-regional trade are Argentina, Brazil, Chile, Colombia and Venezuela. Trade flows have become ever more concentrated in recent years, mainly in a few bilateral trade relationships: three such relationships alone represent half of the trade. In 1998, trade between Argentina and Brazil accounted for 38.6% of intra-regional commerce; that between Colombia and Venezuela for 6.9%, and that between Argentina and Chile for 6.5%.

Table 2-1
Evolution of Intra-regional Export Concentration

Country Pairs /Years	1980	1998
Three main country pairs	34%	52%
Ten main country pairs	67%	78%

Source: CEPAL, Anuario Estadístico 1999. Processed by the IDB

Figure 2-1
Incidence of the 10 Main Bilateral Trade Relationships in Intra-zone Trade



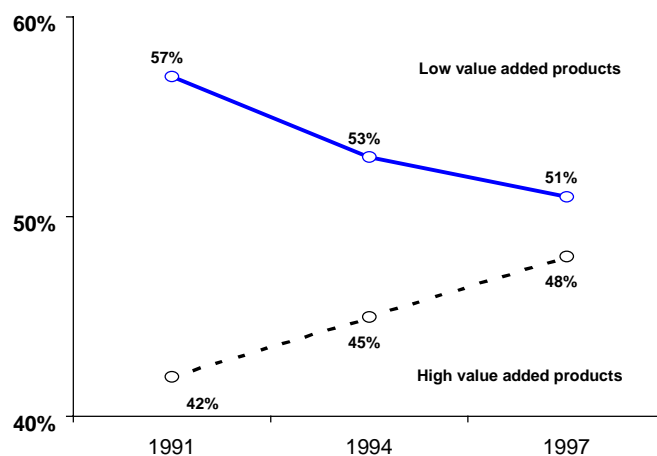
Source: ECLAC, exports FOB, in millions of dollars, 1980 to 1998.

Table 2-2
Main Bilateral Trade Relationships in South America (in millions of US\$)

1998	
Total	37,298.7
ARG-BRA	14,411.3
COL-VEN	2,577.8
ARG-CHI	2,413.5
	52.02%
BRA-CHI	1,851.0
BRA-URU	1,815.6
BRA-PAR	1,598.7
BRA-VEN	1,367.3
ARG-URU	1,338.1
COL-ECU	856.5
ARG-PAR	751.7
	28,982.02
	77.70%

- 2.2 Not only did intra-regional trade grow and become more concentrated but its composition also changed, particularly in recent years. At the beginning of the 1990s, about 60% of traded products were deemed to be of low value added (fuels, foodstuffs, textiles, wood, minerals), and the remaining 40% were of high value added (chemical products, mechanical equipment, electrical and electronic materials). At the end of the decade such shares stood at about 50% each.¹¹ It should be noted that in the same period trade in some low value added products, such as petroleum, grew strongly, highlighting the importance of the growth of products with higher value added. This change entails a substantial alteration in the nature of transport demand.

Figure 2.2
Intra-regional Exports by Sector

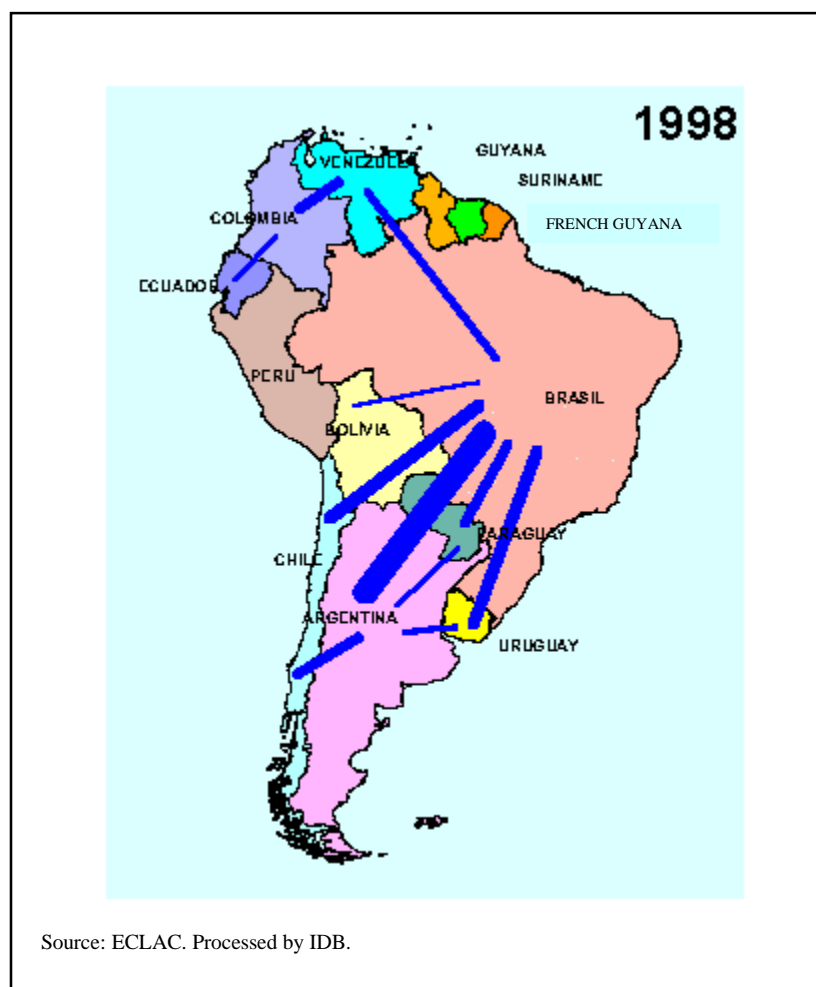


¹¹ See ALADI (2000).

The Geographical Structure of Flows

- 2.3 The figure below shows the scale of current trade flows between the countries of the region, their concentration in Southern Cone countries and between Colombia and Venezuela, and the less significant trade between the Andean Community countries and MERCOSUR.

Figure 2.3
The Flow of Goods in the Region

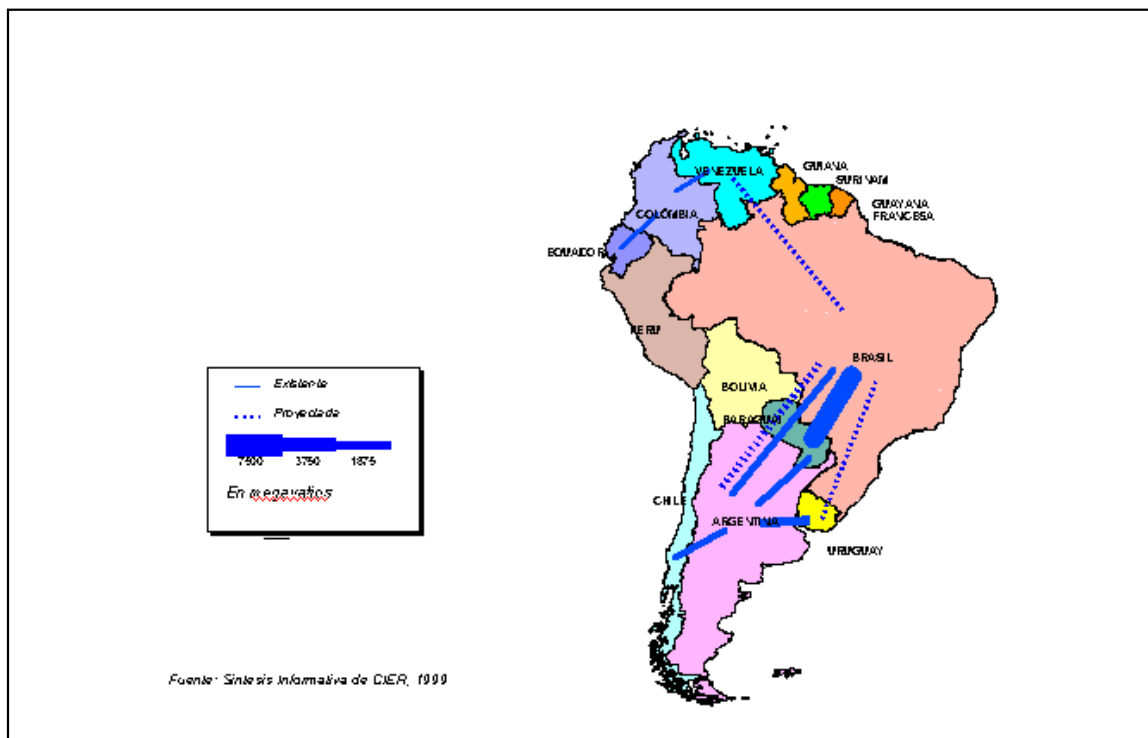


- 2.4 International electricity flows are concentrated in networks set up for that purpose. The most important are linked to binational hydroelectric projects such as Itaipú (between Brazil and Paraguay), Yacyretá (between Argentina and Paraguay) and Salto Grande (between Argentina and Uruguay). There are also important linkages between Colombia and Venezuela, and between Colombia and Ecuador. The sector has undergone significant change in recent years as a result of the progress made in harmonizing regulatory frameworks. One example is the 1998 MERCOSUR Memorandum of Understanding on Electricity, which is geared toward the creation of

an integrated electricity market in the subregion. In this context new transmission lines have been installed between Argentina and Brazil, and between Argentina and Chile, the fruit of private investment in the restructuring and privatization of the electricity sector in those countries. These new interconnections complement very important linkages already in place, such as those between Argentina and Uruguay, and between Brazil and Paraguay.

- 2.5 In the case of natural gas, there is a remarkable development in extraction capacity and in the transportation network. Significant transnational projects have already been undertaken, especially the Bolivia-Brazil gas pipeline, and those connecting Argentina with Brazil, Chile and Uruguay. As in the case of the electricity interconnections, these are private endeavors (albeit with the decisive participation of public companies in some cases), made possible by the sectoral reforms implemented in the various countries. The interrelation between flows of gas and electricity is ever greater, since some of the former is used to generate the latter.

Figure 2.4
Electricity Flows in the Region, 1999



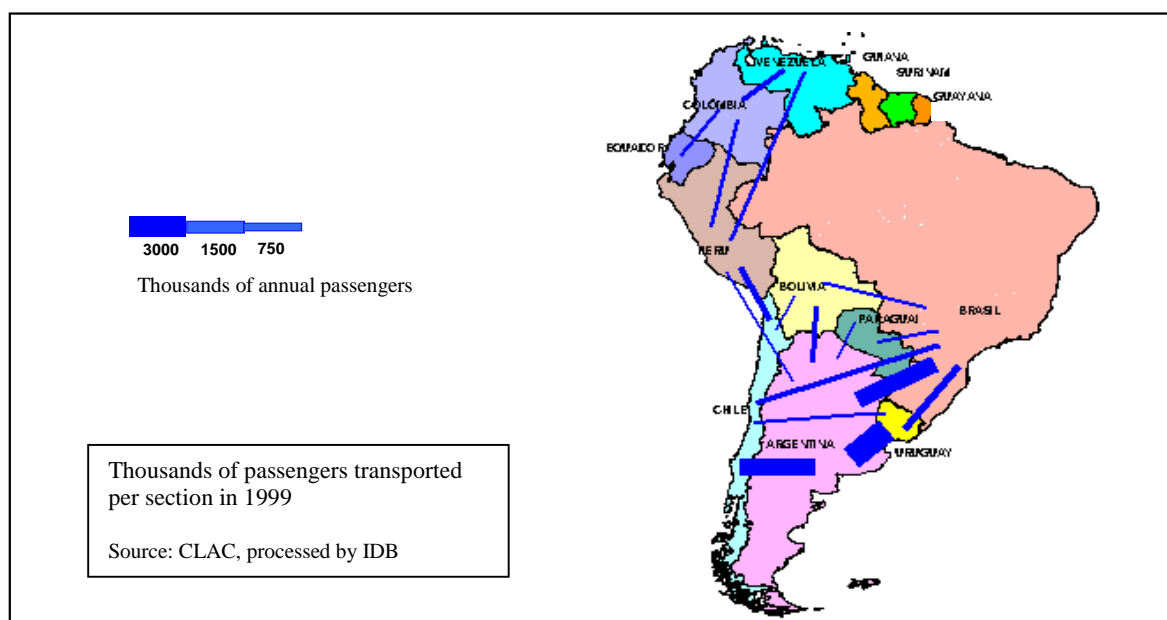
- 2.6 In the 1990s, passenger air transport grew at high rates in all services: cabotage, regional (between countries), and international (with the rest of the world). The pattern of travel shows a marked concentration of journeys within the Southern Cone.¹² The geographical proximity of some major urban centers, tourist trips, and economic integration between visitors' home and destination countries have an appreciable effect on this pattern. Commercial air transport's growing use of hubs has entailed an increase in journeys along particular routes in the region. Strictly speaking, these are segments of international traffic, but they spur evident demand pressure on some of the region's airports.

Table 2-3
Share of Passengers by Country Pairs
(% of total passenger traffic in South America)

Country Pairs	Share of Passengers
Argentina–Uruguay	26.2%
Argentina–Brazil	15.8%
Argentina–Chile	14.5%
Brazil–Uruguay	5.3%
Chile–Peru	4.1%

Source: CLAC–Passengers transported per section. 1999. Processed by the IDB

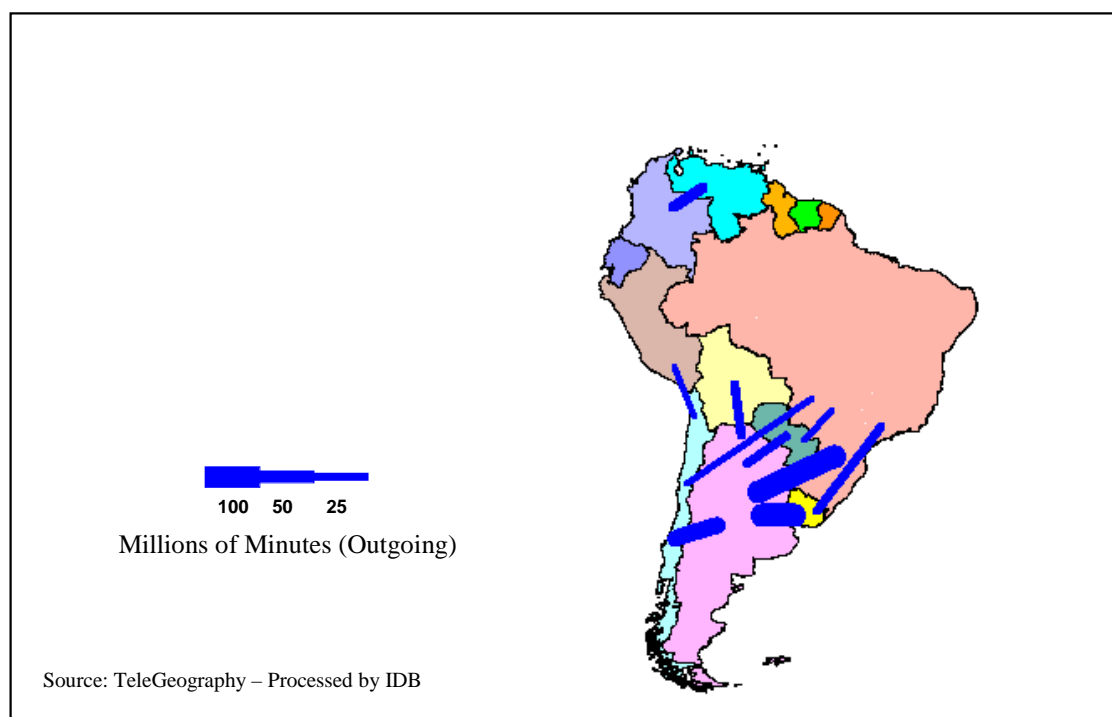
Figure 2.5
Passenger Air Traffic, 1999



¹² The information by section (not by the origin and final destination of journeys) can to some extent distort the results, since a significant proportion of journeys continue on to other destinations.

- 2.7 Voice and data transmissions through telecommunications networks eloquently illustrate the interactions between countries. Of note is that only 30% of outgoing telecommunications are directed at another South American country. The remaining 70% are to the rest of the world, half of them to North America. Another potent indicator is the bandwidth available in Internet connections (International Backbone Routes): of the bandwidth between South America's main cities, 87% is linked with North America and 7% with Western Europe. Just 6% links cities within the region.¹³

Figure 2-6
Telecommunications Flows, 1998

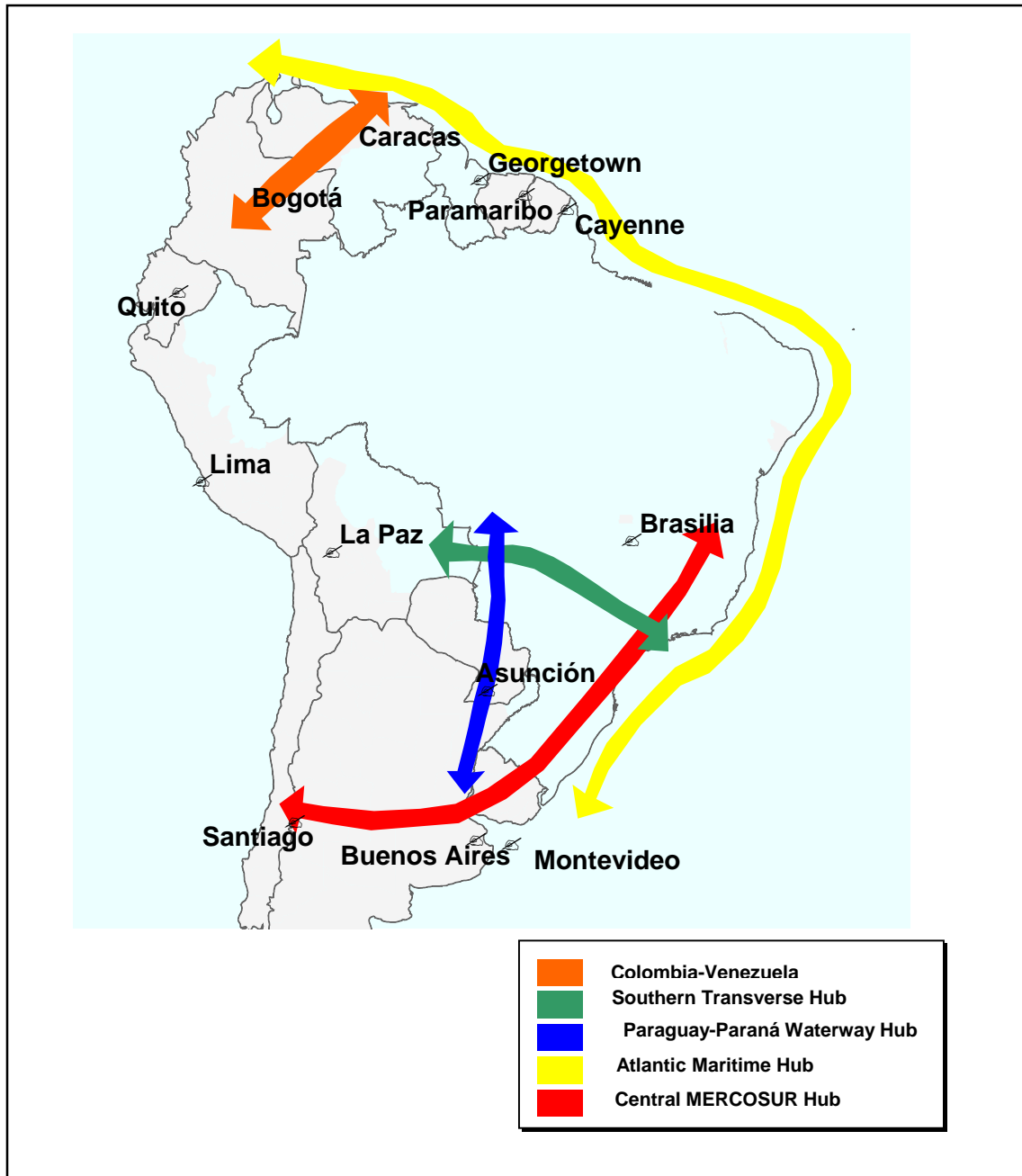


Identification of Current Hubs

- 2.8 Combined analysis of the various kinds of flows analyzed helps to identify the higher-volume hubs through which interactions in the region are currently channeled. They are shown in Figure 2-7.

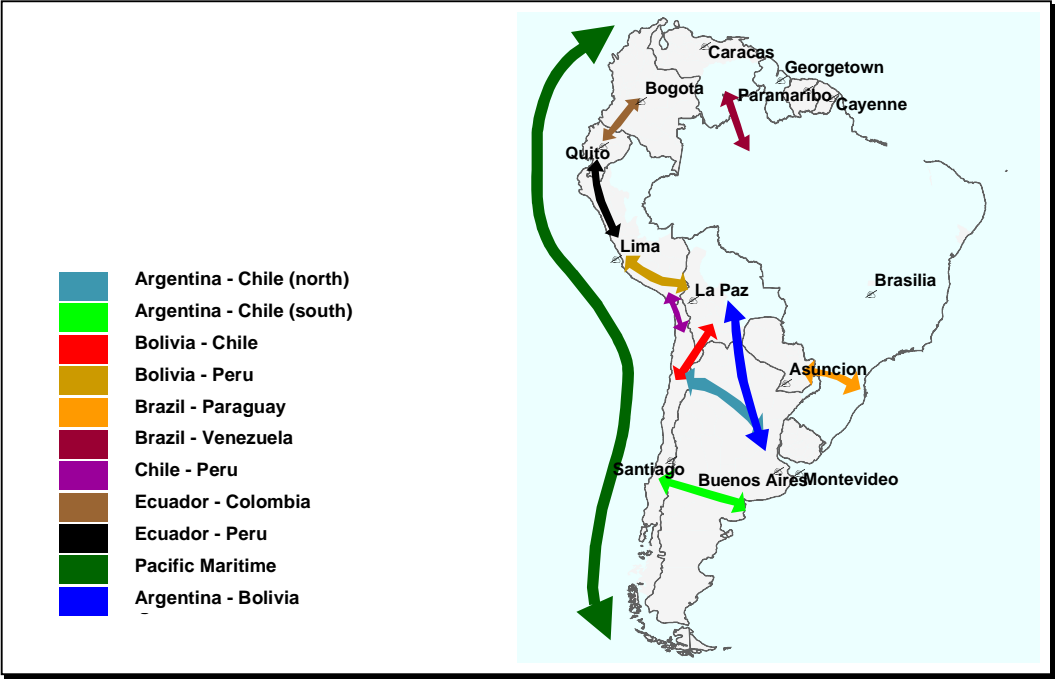
¹³ Value for 1999. Source: TeleGeography, processed by the IDB

Figure 2-7
Principal Current Hubs in Terms of the Volume of Flows in South America

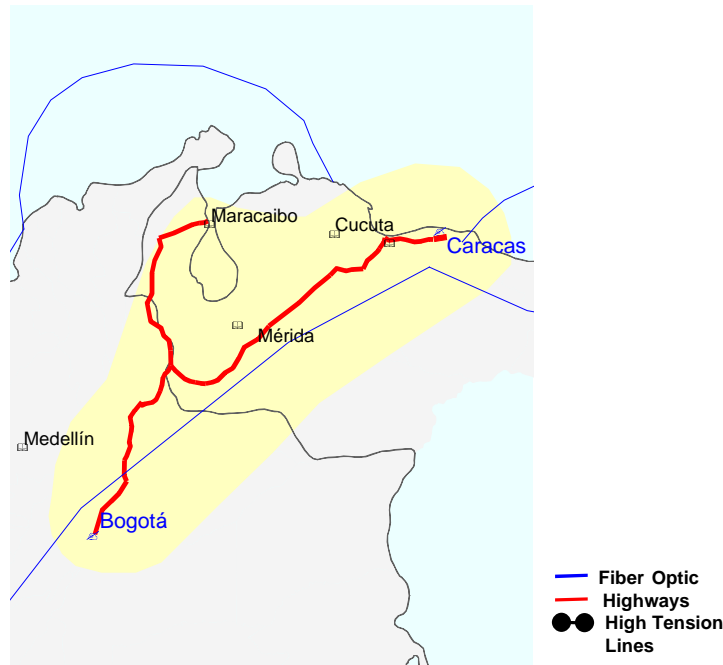


2.9 These hubs, which channel the strongest current flows, are complemented by others of a somewhat lower volume, as shown in Figure 2-8. Detailed analysis would reveal other hubs in which current flows are low or non-existent, but which might have significant development potential.

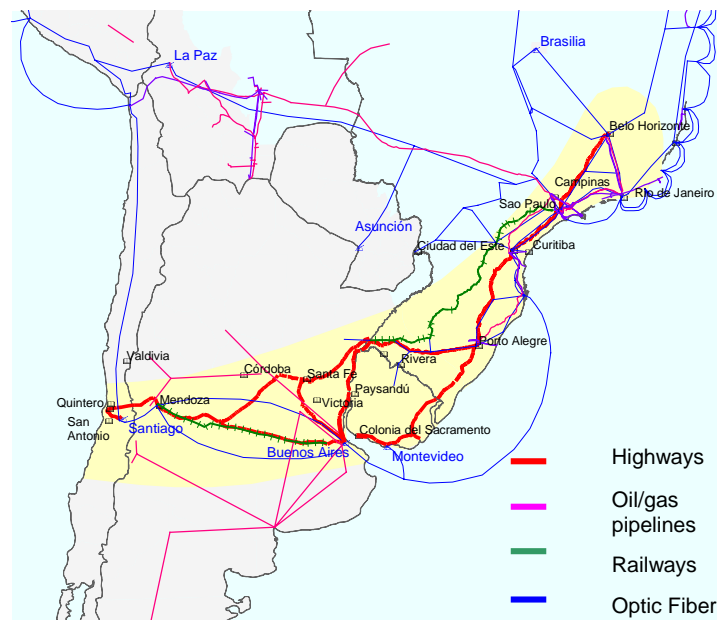
Figure 2.8
Current Exchange Hubs with Significant Growth Potential in South America



2.10 The Colombia-Venezuela hub covers both countries' main centers of production and consumption. It includes various kinds of flows: more than 3 million tonnes transported yearly, half by truck and half by sea and river-sea transport, of which 60% consists of general cargo; moreover there are high tension lines with 380MW capacity.



- 2.11 MERCOSUR's central hub has the highest absolute flows in the region. It includes multiple infrastructure facilities linking centers such as São Paulo, Buenos Aires, Montevideo and Santiago. In 1998 some 18 million tonnes were conveyed, of which 8 million consisted of petroleum through pipelines, and the other 10 million were mostly transported by truck. Some 60% of the volume transported consists of general cargo. There is a clear tendency for traffic not to be confined to a corridor, but rather to form a grid with numerous nodes and routes. International rail transport remains marginal (about 150,000 tonnes a year). River and sea traffic that forms part of other hubs has been excluded.

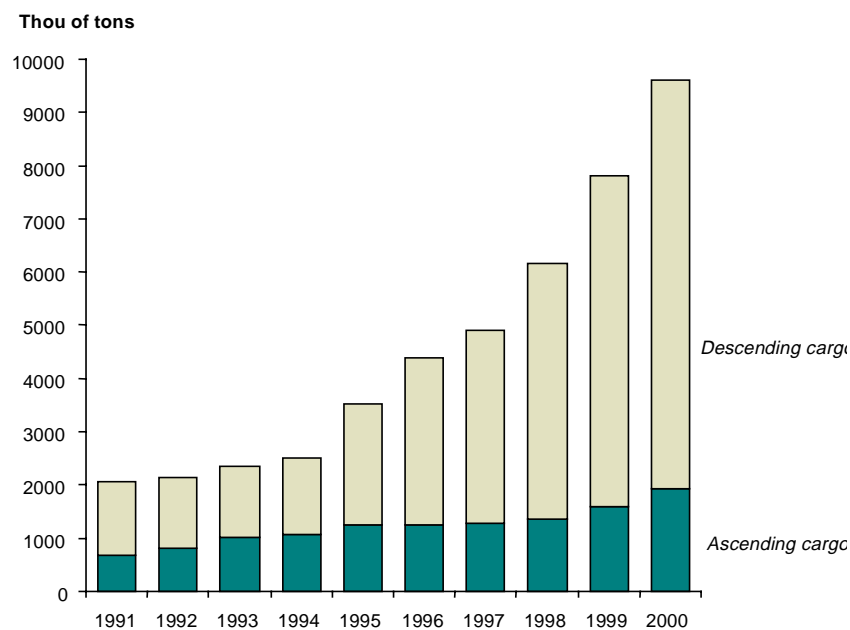


- 2.12 The Paraguay-Paraná Waterway hub has exploited the natural advantages of a navigable network over 2,500 km long. Currently, about 10 million tonnes a year are transported, mostly cereals and oils products, minerals and fuel. A third of this is traffic between the countries of the area, while the rest consists of those countries' export or import traffic. There are three binational hydroelectric power stations in this corridor, with an installed capacity of 17,500 MW, as well as high tension lines carrying the main electricity transmissions between countries in the region.





- 2.13 The transverse-south hub (Bolivia-Brazil) has been strengthened by the construction of the gas pipeline, which it is estimated will transport 9 million cubic meters a day in 2000. Significant movements of land cargo, of about a million tonnes a year, use both the road and railway networks.



- 2.14 The Atlantic maritime hub conveys significant levels of cargo and communications along the coast. Over 25 million tonnes of cargo were transported in 1998, mostly solid and liquid bulk commodities. The laying of submarine cables allows intra- and extra-regional voice and data transmission. The Pacific maritime hub is similar to that of the Atlantic, although with lower cargo volumes and less telecommunications transmission.



From Trade Hubs to Integration and Development Hubs

- 2.15 The hubs described above mainly reflect present flows between the countries of South America. Nevertheless, while current flows and demand are the main criteria for identifying projects and setting investment priorities, determination of the continent's integration and development hubs should also take account of other criteria.
- 2.16 The concept of integration and development hub seeks to embody a more modern and integral form of planning, in which infrastructure is not isolated but forms part of a set of activities on the ground. This concept links physical investment to the social and environmental dimensions of development, and fosters synergy between the various kinds of infrastructure.
- 2.17 The governments are aiming to use the existing hubs to build South America-wide integration and development hubs that orient and organize regional integration activities. This initiative should be founded on a strategic, long-term vision of the whole. Such a strategic vision would help policy and investment priorities to be defined more carefully.

2.18 Besides considering current flows, this strategic vision for identifying integration and development hubs should take account of those potential flows that could be spurred by deeper economic integration, and by a constant increase in trade between the countries of South America. This vision should:

- explore the complementarity between the various economies and identify physical, legislative and institutional bottlenecks;
- establish a frame of reference for the countries' coordinated planning of regional infrastructure activities, optimizing investment and broadening the base of available resources;
- involve common criteria for defining joint priorities, such as the projects' environmental and social sustainability; recent, current or imminent investment in the hubs' areas of influence; the scope and depth of private sector participation; and the balanced geographical coverage of countries and regions.

CHAPTER III

CURRENT SITUATION AND PERFORMANCE OF INFRASTRUCTURE

Current Context

- 3.1 As mentioned earlier, the development of basic infrastructure in South America entered a new historical stage as a result of transformations begun in the last decade. Some common features of this transformation include the state's withdrawal from the direct management of infrastructure, the establishment of new regulatory frameworks and the introduction of competition in certain services, privatization, the entry of new national and international operators, and the creation of new institutions for regulating and overseeing public services.
- 3.2 It is clear that this transformation has been and continues to be highly complex, with significant differences and incongruities between countries and sectors. It is also evident that the results have been various and generally positive, such as an increase in investment and in the supply and quality of services, acceptance by private investors and consumers, and the emergence of new sources of finance.
- 3.3 In light of the experience of the last decade, the removal of such traditional growth bottlenecks as public service inefficiency and deficient infrastructure is an aim that can be (and in some cases has been) met. There is no doubt that the future development of regional physical infrastructure is being discussed in terms different to those of the past because of transformations carried out or in progress.
- 3.4 The current circumstances of physical infrastructure in South America might be viewed as a stage for completing, consolidating and deepening the reforms. Governments continue to adapt to their new role, seeking to optimize regulatory frameworks; to safeguard competition; to balance relations between operators, consumers and regulators; to improve service quality and consumer protection; and to extend the provision of modern services to those sectors of the population that currently lack access.
- 3.5 Private operators have taken the initiative in increasing the supply of new services and projects, since more stable rules of the game have enabled them to concentrate increasingly on reducing strictly commercial risks. Private investors and entrepreneurs continue to reveal their interest in the new opportunities offered by the region. Consumers, increasingly inclined to protect their own interests, play an important role in helping to improve service quality and shape operators' decision-making.
- 3.6 It is worth noting, however, that despite the state's new role in the design, regulation and promotion of financing, state intervention also remains necessary to effect national and regional initiatives whose long-term economic and social dividends are not sufficiently attractive to private investors.
- 3.7 The infrastructure allowing South American countries to integrate faces a number of problems that vary by case and by type of facilities. Some of the more serious difficulties are examined below, although the analysis is illustrative rather than

exhaustive. Problems related to the facilities themselves are examined first, followed by those affecting the legislative and institutional frameworks that regulate their use.

Main Problems Affecting Infrastructure

Road transport

- 3.8 The various sub-sectors of transport differ in terms of their capacity to facilitate the movement of goods and people in the region. It is worth highlighting, first, the main problems posed to physical integration by formidable natural geographical barriers such as the Andean mountain range, the Amazon rain forest and the Orinoco Basin.
- 3.9 Various problems afflict roads that facilitate integration. The hubs that account for most flows suffer mainly from a lack of capacity, while other hubs with smaller flows are principally affected by the poor state of road surfaces, as well as by poor standards and deficient geometrical design. A special challenge is posed by border passes, which were mainly designed to have independent controls in each country. Their very nature thus makes it difficult to impose a unified control structure, and in some cases geography makes it hard to adapt them.
- 3.10 The most serious road capacity problems are in the “MERCOSUR corridor”, where international flows (trucks, buses and private passenger vehicles) add to an increasing level of local traffic. In some sections the average annual daily traffic level is far too high for two-lane highways, particularly in the south of Brazil. The Andes crossing in the MERCOSUR corridor poses particularly severe problems, since winter snow storms make it periodically impassable. Safety is the most serious problem of road capacity saturation: Argentina’s National Route 14, for example, which has significant levels of international traffic, is known as the “death route”.
- 3.11 Hubs with development potential generally face other problems. Many highways are old, with sections in mountainous terrain, thus hampering traffic and increasing costs. An example is the road link between Colombia and Ecuador, particularly the section in the far south of Colombia (Rumichaca-Pasto-Popayán Corridor). Problems of inadequate design for the movement of vehicles from other countries persist throughout the region. For example, the capacity of bridges on Uruguay’s road network is being improved to allow the transit of Argentine, Brazilian and Chilean trucks. In various potential hubs the roads are not paved, making traffic very difficult during part of the year.

Rail transport

- 3.12 Rail has a relatively small share of international traffic, since most South American railways were designed for domestic transport, which is currently much more significant than traffic between countries.¹¹ Most of South America’s rail network was created in the first half of the twentieth century, and has faced financing and management problems in recent decades.

¹¹ For further details, see Thompson (1995).

- 3.13 In general terms the network is somewhat dilapidated, which constrains the use of trains large enough to exploit the economies of railways to the full. In the last decade there has been a trend toward private rail operators, but the newcomers have found it very difficult to make the significant investment needed to overcome the deficiencies of the infrastructure. The main problems caused by the poor state of the rail networks are restrictions on trains' cargo capacity, speed limits, gauge differences between countries, and the lack of multi-modal links.

Air transport

- 3.14 The volume of air cargo between South American countries is still very low. Passenger flows, by contrast, have increased significantly. Nevertheless, the share of regional flows is relatively small compared with the air transport of cargo and passengers to the rest of the world, and with domestic transport within the countries. The capacity problems evident in several airports generally stem from these latter forms of traffic rather than from travel between countries of the region. A particularly serious problem concerns air traffic control, which should guarantee the reliability and safety of air travel.
- 3.15 Capacity difficulties are matched by problems of service quality, since the facilities are in transition. These factors, however, do not seriously hinder transport between the countries of the region. Improvements to infrastructure will be driven by cabotage traffic and by trips to and from the rest of the world, although regional traffic already has a significant share of air travel in the main terminals.

River and maritime transport

- 3.16 South America's river networks have enormous transport potential, but they are relatively poorly exploited. There is a significant amount of river transport, of various kinds, in the three main basins (Amazon, Orinoco and Paraguay-Paraná). Only some of this is regional integration traffic. Much of it involves imports from and exports to the rest of the world (and occasionally to or from other countries in the region), with the rivers serving as large estuaries that facilitate the access of overseas shipping. Some is also cabotage traffic between river ports of the same country. In some cases, it consists of river traffic between ports of different countries, which is subsequently transferred to (or from) other overseas ports. This can be defined as regional integration traffic. A special form of movement is trans-border river traffic, which is very important locally and is generally served by poor facilities.
- 3.17 Most important in the Amazon basin is import and export traffic to and from overseas river ports, and cabotage. Cargo and passenger transit between countries is still low. In the Orinoco Basin the situation is similar, although there is the possibility of developing integration flows between Venezuela and Colombia through the Meta River. Different forms of river, overseas and cabotage traffic coexist in the River Plate Basin, they typically involve trade between countries of the region or, rather, traffic from one country that uses another's facilities to connect with overseas markets, such as in the Paraguay and Paraná Rivers.

- 3.18 There are some doubts about the reliability of the infrastructure servicing this traffic, largely because of the basin's hydromorphological instability and the lack of adequate support for navigation and inter-modal connections (especially with the railways). Particular attention must be paid to these problems in devising future projects to meet current and potential demand in a sustainable manner.
- 3.19 The region's sea ports, as well as its airports, are terminals in which numerous flows converge and in which intra-regional movements account for a relatively small share of total traffic. Maritime and air activity has become increasingly global, characterized by business concentration and by hub-based operations,¹² mainly container traffic. Operational decisions are fundamentally private (regulations, such as bilateral agreements, are still significant in air transport), while infrastructure decisions are public-private. The geographical layout of the hubs, through which the region is integrated into the global networks, is now being developed.
- 3.20 The ports are generally in transition, with growing private sector involvement. Activity has increased significantly in recent years and notable improvements have been made. Although port infrastructure suffers from a number of problems (such as its land access or the lack of modern multi-modal terminals), these do not hinder trade flows between the countries of the region. Trade with the rest of the world will be the driving force behind port transformation.

Table 3-1
Main Problems Affecting Transport Infrastructure

Highways	<ul style="list-style-type: none"> ▶ Problems of insufficient capacity in some sections ▶ The Andean crossing in the MERCOSUR hub ▶ Physical problems at border passes ▶ Road safety problems ▶ Standards and geometry ▶ State of road surface
Rail Network	<ul style="list-style-type: none"> ▶ Restrictions on the operation of high-capacity trains ▶ Gauge differences ▶ Lack of multi-modal links ▶ Speed restrictions
Airports	<ul style="list-style-type: none"> ▶ Problems of insufficient capacity in some terminals ▶ Lack of equipment to guarantee operational reliability and safety
Ports and Waterways	<ul style="list-style-type: none"> ▶ Correction of key passes and support to ensure navigability ▶ Lack of multi-modal links with land transport

¹² On this issue, see Hoffmann (2000).

The energy sector

- 3.21 The economic organization and ownership structure of the region's energy sector (which pioneered the development of large-scale projects with a significant impact on integration) have undergone a radical transformation. This has led to key changes in the approach to integration projects. In the past, binational hydroelectric plants and electrical inter-connections were built by government enterprises or bodies; now, new projects are almost exclusively run by the private sector. There have been some very important projects in recent years, and the energy sector has undoubtedly become an engine of economic integration, especially in the Southern Cone.
- 3.22 Regional projects allow economies of scale to be exploited and better use to be made of national resources, thereby facilitating major projects such as the Bolivia-Brazil gas pipeline and electrical inter-connections. However, the qualitative leap forward that could be made in this sector, especially in the case of electricity (moving from exchange and supply contracts to real regional energy markets) depends on regulatory and operational harmonization. Development of these markets would foster better exploitation of existing inter-connections through trade in secondary energy, more reliable national systems, and the collective broadening of the available resource base.
- 3.23 Structural reform and the privatization of public companies in the energy sector has enabled many countries of the region to develop electrical energy markets. These internal processes -whose nature and intensity differed in each country- centered mainly on internal markets.¹³ The international projects currently under way (which connect the electricity systems of countries in the region) stem mainly from bilateral agreements on the construction of inter-connections and energy provision, rather than from open markets. The infrastructure facilities are therefore for the specific use of an operator rather than for general use, and normally serve their purpose. The main problem concerns their size: according to a detailed technical study by the *Comisión de Integración Eléctrica Regional* (CIER), there is great potential for electrical integration in the region.
- 3.24 The case of the gas and oil sub-sectors is similar, especially as regards existing distribution pipes and those under construction in the region. As with electricity, these two sub-sectors might be too small to meet current and potential demand for gas and oil flows linked to regional market integration. It is worth noting that the private sector's growing role in the energy field, especially in distribution facilities, requires closer relations between state and business in the whole investment process, from the assessment phase to the financing, construction and operation stages. Governments also need to coordinate the regional integrated planning of investment among themselves.

The telecommunications sector

- 3.25 Telecommunications is probably the sector that has most quickly and aggressively responded to the changes arising from restructuring and deregulation. As in the energy sector, private capital inflows into telecommunications have mostly gone to infrastructure.

¹³ To analyze this issue, see USAID/IDB (1999).

The potential for growth is enormous because of continuous technological change and the introduction of new services. There is significant room for growth in information technology and communications (both the vehicle and object of the globalization process) in the region, where access and service levels lag behind those of the developed countries. This partly accounts for the great interest international operators and investors in general have in projects in the region.

- 3.26 In that context, governments' main focus at the regional level is on harmonizing regulations and establishing common norms that facilitate the activities of operating companies in expanding high-speed networks. They also concentrate on developing and consolidating a regional telecommunications infrastructure with the most advanced technology.
- 3.27 Country-specific issues should also be coordinated regionally, especially in areas such as protection of competition and free access to telecommunication networks. This would reduce communications costs and improve access to information technology. It is critical that governments seek the broadest possible public access to the Internet and to the new services provided by the communication networks, so as to enhance the training of the human resources required by a modern society.
- 3.28 Telecommunications networks, mainly fiber optic, have sprung from market opening and a global process of integration. The networks are being expanded by service companies and carriers that build and operate trunk networks. They are partly for specific use, although an increasing portion is for general use. As new networks they face no great problems in meeting their goals. Other types of infrastructure account for some of the new projects, particularly rail networks and high-tension electricity transmission.
- 3.29 Finally, it is needless to emphasize the strategic role these services play in improving the competitiveness of South American firms in terms of productive efficiency, lower costs, and the creation of global marketing and distribution channels.

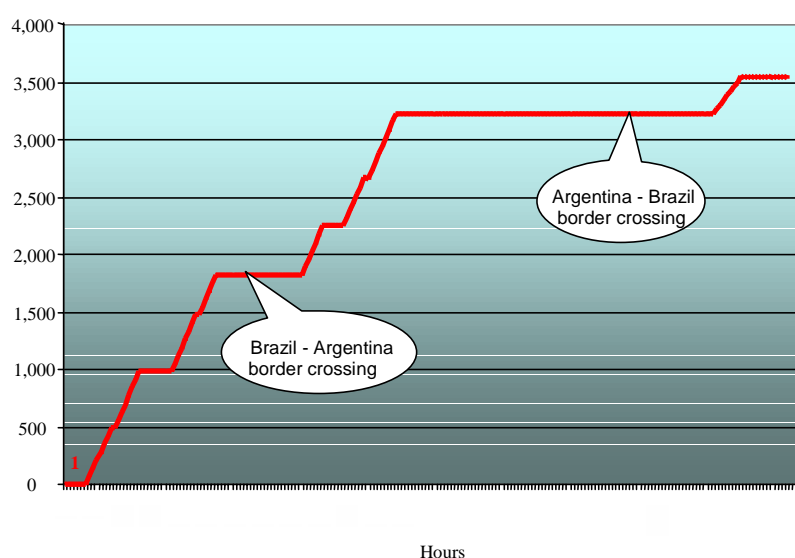
Main Problems in the Institutional and Regulatory Frameworks

The transport sector

- 3.30 In the 1990s, there was significant progress in coordinating regulatory frameworks among countries of the region, both within the Andean Community and MERCOSUR, but problems continue to hinder vehicle transport and negatively affect its costs. The main difficulties include cargo reserve regimes that reduce the sector's operational efficiency, delays and extra costs at border crossings, and the lack of harmonization between various national regulations.
- 3.31 Cargo reserves have increased in recent years, entailing intermediate reloading (transshipment) at border crossings. Not all transshipments are negative, and in some cases are the result of firms' operating strategies. However, they are often forced on companies by norms introduced under pressure from national hauliers that want to avoid competition, often alleging various asymmetries.

- 3.32 Delays and extra costs at border crossings are probably among the most serious barriers to the transport of goods between South American countries. Waiting times at the border easily exceed periods of movement, leading to high levels of inefficiency in truck use, the risk that the goods will be stolen or damaged, and other extra costs that ultimately increase freightage. For example, a typical journey by truck between São Paulo in Brazil to Santiago in Chile, takes around 200 hours to cover 3,500 kilometers, while crossing the two borders (between Brazil and Argentina and between Argentina and Chile) takes just over 100 hours. Delays of several days for goods vehicles are common at most border crossings between South American countries.¹⁴

Figure 3-1
Diagram of Typical Journey Time for Trucks Between São Paulo and Santiago



- 3.33 The main problems facing rail transport between countries are infrastructural rather than regulatory, but rail also faces border delays and difficulties in exchanging rolling stock. The fact that there are only a few private operators makes it easier to integrate services. In the MERCOSUR corridor, for example, the same firm provides rail services in the south of Brazil and in north-eastern and central Argentina. This makes it easier to introduce new services, such as bi-modal road-railers.
- 3.34 Although significant progress has been made in recent years, regulatory restrictions persist in river and maritime transport. The most important of these has been the continuation of cargo reserves. As regards river navigation, particularly on the Paraguay-Paraná waterway, regulations make it difficult to realize all the economies offered by this form of transport. For example, regulations limit the size of the convoys or impose service contracts for non-essential services.

¹⁴ Source: Ad-hoc report by S. Bouzas.

- 3.35 The main regulatory problem in regional air transport is market reserves. Although progress has been made in the Andean Community, the rest of the region still lacks the conditions to improve the supply of services, especially of passenger transport.

Table 3-2
Main Problems in the Regulatory Frameworks for Transport

Automotive Transport	<ul style="list-style-type: none"> ‣ Cargo reserves that make transshipments necessary ‣ Delays and significant costs at border crossings ‣ Tax asymmetries ‣ Different qualification requirements
Rail Transport	<ul style="list-style-type: none"> ‣ Delays at border crossings ‣ Difficulties in exchanging rolling stock
Air Transport	<ul style="list-style-type: none"> ‣ Market reserves
River and Maritime Navigation	<ul style="list-style-type: none"> ‣ Cargo reserves ‣ Safety regulations that impose excessive costs

The energy sector

- 3.36 The lack of harmonized technical standards, and a harmonize structure of energy markets in the South American countries, has prevented the region from fully exploiting the potential for inter-connection. In many cases, significant business opportunities have been lost because of deficiencies in the institutional regime needed to bring them to fruition. Substantial progress has nonetheless been made in recent years, such as the memoranda of understanding on electrical and gas integration in MERCOSUR.
- 3.37 Severe structural asymmetries remain to be overcome. Existing electrical and hydrocarbon energy inter-connections have been constructed mainly through *ad hoc* contracts and not as part of a conceptual and strategic plan to integrate markets. Once a competitive regional market develops "...integration will advance until it finds its limits in terms of commercial and technological viability" (CIER). CIER estimates suggest that the economic benefits of electrical integration could reach US\$1 billion a year.

The telecommunications sector

- 3.38 The telecommunications sector is undergoing a process of integration at the global level, as well as significant technological innovation. The various telecommunication services, which are increasingly operated by private companies, are tending to converge. This has led to an improvement in costs and efficiency, and to a change in operators' business models. The emergence of firms that provide infrastructural support separate from operators of voice and data transmission services is evidence that the sector is evolving.

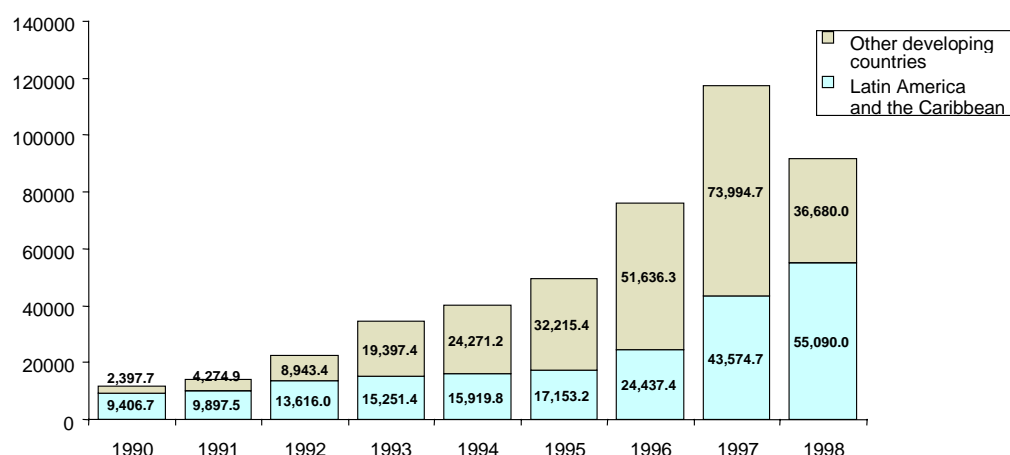
- 3.39 In such a dynamic environment, regulatory harmonization to pave the way for the effective integration of telecommunications among countries has made significant progress at the international level. This has led to an improvement in global and regional integration. Despite this progress, norms and standards still need to be harmonized in order to ensure the full connectivity of national systems.
- 3.40 In setting a government working agenda, it should be noted that concerted action in these fields will have the greatest short term impact at relatively low cost. Greater effort and continuity is needed in a number of areas, including regulatory harmonization, better management of border crossings, making information sources compatible, eliminating asymmetries so as to foster the development of infrastructure-related emerging markets for goods and services, regional coordination of investment plans, and the joint assessment of projects on the basis of their technical and economic merits.

The Supply Response in the Last Decade

- 3.41 Basic infrastructure in South America has experienced sustained growth in recent decades, especially in the 1990s. The supply of infrastructure responded well to a significant increase in demand. This trend has affected both basic infrastructure in general and that serving integration flows between the countries of the region. This improvement was largely because of the increasing participation of the private sector in infrastructure investment and management. In Latin America and the Caribbean¹⁵ this is reflected in the fact that the region was the main destination for developed countries' foreign direct investment in infrastructure, as shown in the figure below.

¹⁵ The available information does not permit a breakdown by Latin American and Caribbean country.

Figure 3-2
Foreign Direct Investment in Infrastructure in Latin America and the Caribbean
(in millions of US\$)

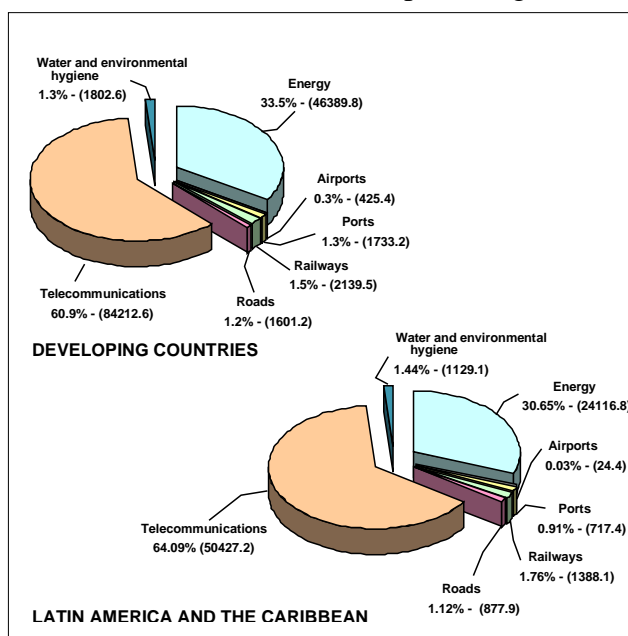


Source: World Bank PPI Project Database

Based on: Frank Sauer : "Attracting Foreign Direct Investment Into Infrastructure". 2000

- 3.42 It is worth noting that this investment is mostly concentrated in two sectors - energy and telecommunications. These have clearly been the most attractive to private business because of their capacity to provide services that are of public interest and that simultaneously provide a high return for investors. In contrast, transport investment has been relatively low. Figure 3-3 clearly demonstrates this trend, which has had a similar effect in Latin America, the Caribbean and the rest of the developing world.

Figure 3-3
Sectoral Composition of Foreign Direct Investment in Infrastructure
(in millions of US\$ and percentage)

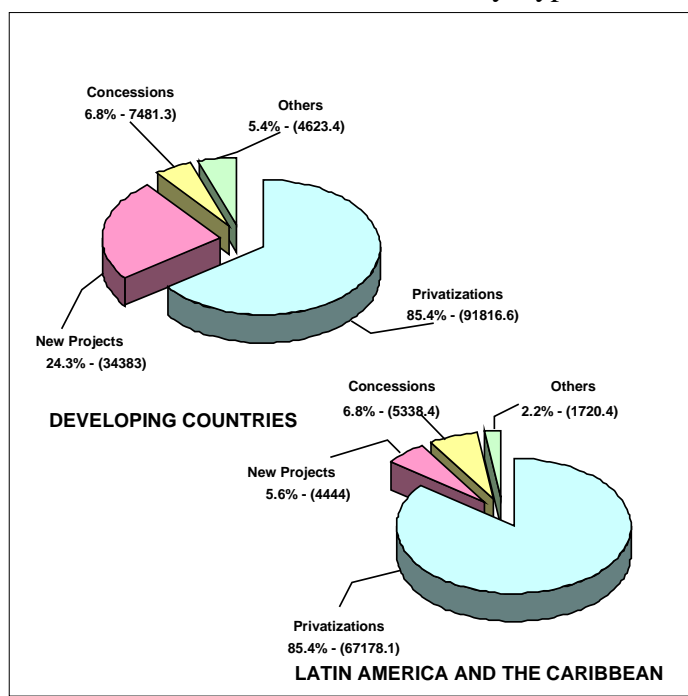


Source: UNCTAD

3.43 The way in which investment is channeled is another relevant feature of private foreign investment. As shown in Figure 3-4 most investment went to privatization processes, and to a greater degree than in other developing countries. This enabled investors to acquire public assets and then to cover accumulated physical investment deficits by expanding equipment and installations in sectors where it was commercially attractive to do so. This process is useful and its effects are enduring, since the renewal and expansion of infrastructure in the 1990s will continue to have an impact. Two factors, however, are worth highlighting:

- Such investment will be smaller, since the privatizations still pending are less significant.
- It has not affected some infrastructure sectors, especially land transport.

Figure 3-4
Foreign Direct Investment in Infrastructure by Type of Transaction



Source: UNCTAD

3.44 In short, given the sharp increase in demand in South America during the last decade, infrastructure and its attendant services responded well. This holds true for economic infrastructure as a whole, and for those of its components that support regional integration flows. The participation of the private sector through privatizations and concessions was crucial to this response, but current privatization models appear to have reached their limit and the state retains its key strategic role:

- To adapt regulatory frameworks and to adjust concessions and privatizations in order to plan networks.

- To correct market imperfections, thus facilitating access to financing and managing risk.
- To carry out socially helpful projects that have no commercial allure.
- To promote interaction between the countries of the region, especially in terms of integrated investment planning.
- To ensure that infrastructure development has a high degree of local impact.

CHAPTER IV

GROWTH SCENARIOS AND THEIR IMPACT ON INFRASTRUCTURE

Main Trends

- 4.1 The transformation of the basic infrastructure sectors is taking place in a context of strong growth in trade and, generally, in the movement of goods, people, energy and information between countries of the region. That the infrastructure servicing these flows has been able to absorb the increased demand is largely because of those transformations. However, an objective examination reveals that this infrastructure is often very expensive, is deficient in capacity and service quality, and that the norms regulating its use tend to lessen efficiency and discourage investment.
- 4.2 Some regional trends will certainly persist. Economic opening and trade liberalization will continue, stabilization and macroeconomic restructuring will be further consolidated in the region, and the structural reform of infrastructure and services will be pursued. At the regional level, the enlarged MERCOSUR will strengthen its links, the Andean Community process will speed up, Guyana and Suriname will integrate further with the South American continent, and progress will continue in intra- and extra-zone trade and economic agreements, in the framework of the model of open regionalism being applied by Latin America.
- 4.3 If current trends in growth and regional integration persist in the future, the problems and constraints of regional infrastructure will certainly be exacerbated, with particular effects on goods trade. The difficulties will be even more serious if there is greater regional integration but no concerted action on regulatory, institutional and investment issues. Problems will arise not only in the main corridors, but also in others that have emerged from the sharp increase in trade in the region.
- 4.4 From the perspective of the inter-relations between regional integration and the demands on infrastructure, two trends stand out. The first is an increase in trade with greater value added, which has recorded the highest growth rates in intra-regional commerce. This affects the way goods are transported, putting greater pressure on road and multi-modal transport. The second trend concerns the deepening of regional economic agreements, which has an ever greater impact on the logistical and locational decisions of large companies in the region. The prospects of securing economies of scale, and of optimizing management within firms to exploit the regional market, will depend on management and investment decisions that can only be made if there are adequate physical connections, and if the firms have confidence in both the stability of regional agreements and the rules of the game at the sectoral level.

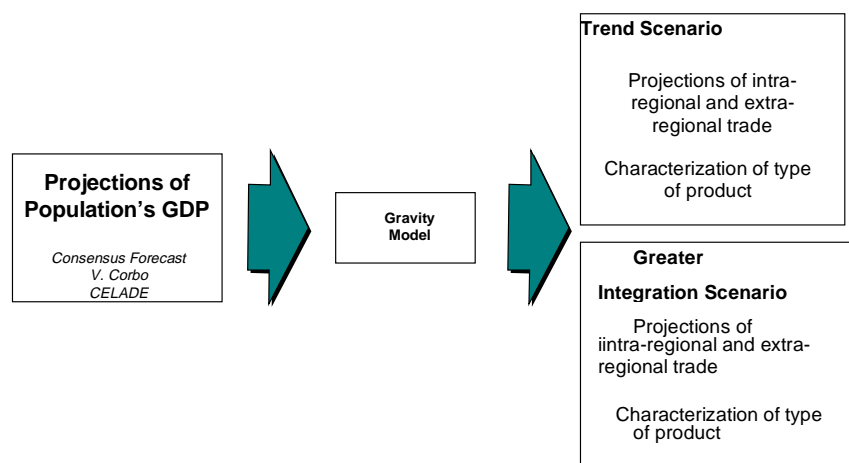
A Preliminary Exercise

- 4.5 The previous chapters reviewed the state of integration infrastructure in South America, its link to the changes under way in the region, its main hubs, and some of the problems facing both infrastructure itself and the norms that regulate its use. This section will provide a preliminary assessment of future economic conditions under two scenarios (which differ

according to the degree of regional integration), their impact on infrastructure, and how the latter can be a severe obstacle to trade.

- 4.6 The exercise focuses on goods trade and transport infrastructure, since in the other two sectors examined (energy and telecommunications) there is a clear possibility of private sector response to increased demand, so long as the regulatory framework does not impede it. Some modes of transport, by contrast, are beset by significant “market failings”. Although there are clearly beneficial projects to improve and expand basic infrastructure, it is difficult for the private sector alone to provide the investment to carry them out because of the sums needed, the perception of risk, and the difficulty of obtaining part of the earnings in order to recoup the investment. These investments, such as improvements to roads, border crossings, railway networks, waterways and multi-modal terminals, require the active and coordinated participation of governments.
- 4.7 A gravity model was used to estimate future trade between countries. Used to analyze and forecast various types of flows, these models assume that the interaction between two areas depends positively on their output, and negatively on the distance between them. They are increasingly used to predict trade flows.¹⁹ The model is based on GDP and population projections for the countries of the region.²⁰ Two different scenarios were posited: a trend scenario, and another assuming greater regional integration. Intra-regional and extra-regional trade flows were estimated for each scenario, and an attempt was made to qualify the type of products that would be traded.
- 4.8 The results of this exercise are not meant to be precise, but to give an idea of the size of the gap that could develop between the possible demand for and the current supply of infrastructure. The exact calculation of these gaps requires quantitative and spatial analysis using geographical information systems and simulation models that are beyond the scope of this report.

Figure 4-1
Methodological Scheme



¹⁹ For example, Soloaga and Winters (1998).

²⁰ This exercise is based on the work of Corbo (2000).

Trend Scenario and its Impact on Infrastructure

- 4.9 As noted above, a trend scenario assumes the continuation of present integration policies. This suggests that intra-regional goods trade will grow by around 10% a year, and that its share of the region's total trade (currently 25%) will rise to 29% in 2005 and 31% in 2010. Most of this growth will be concentrated in those hubs that currently account for most flows.
- 4.10 The composition of trade will also change, since products with greater value added (which are usually included in general cargo) will grow much faster than trade as a whole. This process will be matched by significant growth (although at a lower rate) of extra-regional trade, and by a sharp increase in domestic trade flows. In short, the trend scenario suggests that there will be sustained growth in trade flows, that this growth will be concentrated in those hubs that currently account for most flows, and that there will be greater value added in goods trade.
- 4.11 If these projections prove correct, current infrastructure-related constraints in the main hubs will worsen, and problems in those hubs with growth potential will increase. This will lead to greater congestion and delays at border crossings, notably in the enlarged MERCOSUR and the Colombia-Venezuela hub. This would happen because automotive and, in part, air transport, account for most new movements of goods with relatively high value added. These forms of transport allow goods to be transported in smaller volumes, more quickly, and with an accuracy that is better suited to the requirements of supply chains.²¹
- 4.12 There will also be greater congestion problems in other types of transport infrastructure (roads, airports, ports), though these will stem less from intra-regional goods flows than from greater domestic and extra-regional flows, and from the increasing movement of passengers spurred by greater vehicle use and mobility.

Greater Integration Scenario and its Impact on Infrastructure

- 4.13 The greater integration scenario is based on a vision of a more united South America comprising an integrated economic space, the outcome of various policy initiatives:
- MERCOSUR moving toward the creation of a single market.
 - A deepening of the Andean Community.
 - Greater integration between the Andean Community and MERCOSUR.
 - The stronger integration of Guyana and Suriname in the region.
 - Progress in establishing a market in which production factors, people, culture and tourism circulate more freely.
 - Progress in harmonizing macroeconomic management.

²¹ This trend might be mitigated as the railways and river and maritime transport become actively integrated in multi-modal transport.

- 4.14 In this scenario, intra-regional trade would grow by 12% a year and its share of the region's total trade (currently 25%) would rise to 32% in 2005 and 35% in 2010. Goods with greater value added, more than in current trade flows, would account for most trade. The analysis shows that, with the trade levels envisaged under this scenario, infrastructure and its regulatory frameworks would prove insufficient both in the more developed hubs and in those with significant growth potential. The results, which it should be stressed are preliminary, can be summarized as follows:

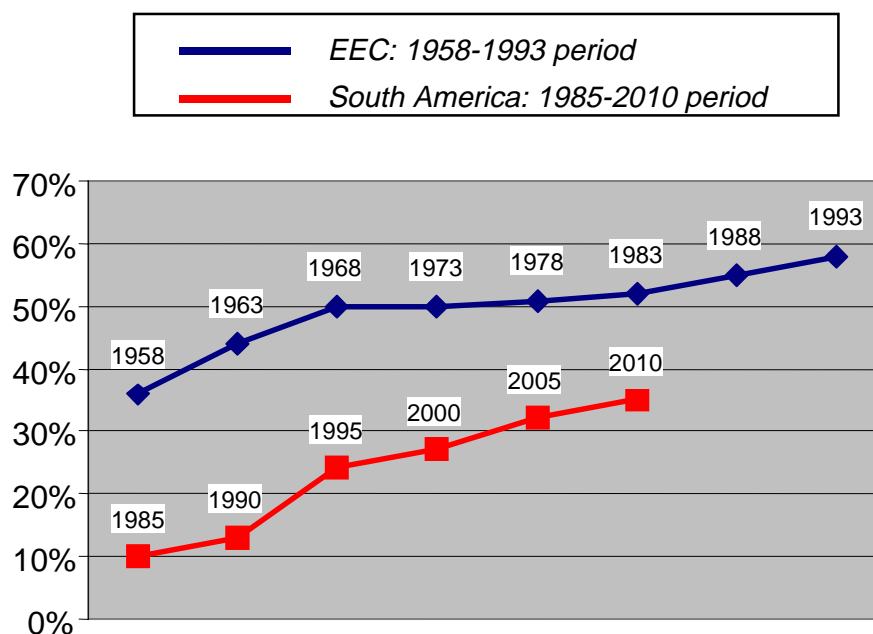
Table 4-1
Projected Trade Growth
(in billions of US\$)

Scenario	Year	Intra-regional Trade	Extra-regional Trade
Current Situation	2000	90	247
Trend Scenario	2005	145	347
	2010	213	480
Greater Integration Scenario	2005	164	347
	2010	265	487

Source: Corbo, 2000.

- 4.15 A comparison with the European experience shows that the level of integration being proposed is realistic. In a greater integration scenario, intra-regional trade in South America in 2010 (expressed as a share of the total trade of the countries of the region) will be similar to that in Europe in 1958, at the start of its economic integration process.

Figure 4-2
Evolution of Intra-regional Trade as a Percentage of Total Trade in Europe



Source: IDB

- 4.16 By way of example, the impact of these growth rates on the congested border crossings for vehicles between Argentina and Brazil can be gauged. Some 850 trucks a day use the three crossings. Making some assumptions about the composition of cargo and the type of transport, it can be calculated that 2,500 trucks will use these crossings in 2005 under the trend scenario, and 3,300 under the greater integration scenario.
- 4.17 This figure will respectively rise to 5,000 and 7,000 trucks a day in 2010. The sharp growth is due to the combined effect of an increase in intra-regional trade and the types of products that are traded. It is expected that goods with greater value added will account for most of the increase and that -if transport options remain as they are- these products will constitute a high proportion of automotive transport.
- 4.18 In short, although there has been a significant improvement in the infrastructure that supports greater regional integration (notably in the area of transport and norms for its use), a number of problems hamper its sustainable development. A preliminary analysis shows that current trends will significantly exacerbate these problems, particularly in goods trade through the main hubs. In a greater integration scenario, these problems will worsen over time both in the main hubs and in those with development potential, to the point that infrastructure would impede greater integration.

A Preliminary Review of the Current Project Inventory

- 4.19 The requirements for improving regional integration infrastructure and its regulatory frameworks have traditionally been subject to attention, and a number of institutions work on the issue. Over the years, ideas and projects have been developed by governments, *ad hoc* institutions and the business community covering all sectors and countries of the region. There are numerous project surveys -such as those undertaken by the Institute for the Integration of Latin America and the Caribbean (INTAL) and the Andean Development Corporation (CAF)- which require constant updating. These projects vary in scope, from thoroughly researched and detailed initiatives to basic ideas.
- 4.20 The existing projects should serve as a basis for closing the gap between the demand and supply of services highlighted earlier. A preliminary review of the current project inventory reveals that many projects are in line with demand. In any case, if South American governments were to undertake the integral evaluation and coordination of these projects, the countries of the region would be in a position to:
- Allow governments to prioritize projects that can be substitutes for each other, since these have been conceived to satisfy the same demand.
 - Develop “pioneer” projects designed to meet potential demand and fulfil the requirements needed to satisfy such projected demand; disregard those related to corridors where there is no demand and no short-term prospect that such demand will arise.
 - Promote projects that are more advisable from a technical, financial, economic, juridical-institutional and environmental perspective, thus helping to obviate the misallocation of pre-investment resources to projects of questionable feasibility.

- Develop projects that might have positive socio-environmental effects, disregarding those projects under study that might have almost no impact in these areas.
- Promote the study of those projects not yet included in the project portfolio and that might meet existing or potential demand, both in terms of overcoming bottleneck problems and in creating missing links.

4.21 In short, coordinated government action to promote the study and development of regional integration infrastructure projects will help hasten analysis. This in turn will serve to effect initiatives that are currently mere ideas, and take them to the stage of feasibility studies. It will also take into account the relevant demand and foster the study of alternatives. These aspects must be founded on an analytical approach that is regional and integrated.

CHAPTER V

A STRATEGIC MEDIUM- AND LONG-TERM VISION

- 5.1 A strategic medium- and long-term vision should seek an economically and socially stable South America whose economic growth is socially and environmentally sustainable, and which is committed to poverty reduction and greater access to education and employment opportunities. This vision is one of growing economic and social integration between the South American countries, but also one in which they increasingly participate in the international trade in goods, capital and knowledge.
- 5.2 Grounded in the notion of open regionalism, this strategic vision of regional integration foresees the creation of an integrated economic area. This area, the outcome of a vision that complements and exceeds purely national visions, should become the platform from which South America attains the international standing it merits by virtue of the potential of its human and natural resources.
- 5.3 Regional infrastructure can thus be examined from other than the traditional perspective. The aim is not only to promote projects and improve corridors to facilitate trade, but to view physical infrastructure in terms of a new model that helps conceive and construct large hubs to develop and integrate South America.
- 5.4 This new conception rests on a comprehensive vision of sustainable development based on certain fundamental concepts:
 - geographical areas should be spheres of opportunity not only for economic growth, but also (and especially) for social development;
 - based on regionally-specific criteria and norms, environmental sustainability should be viewed as an opportunity for growth and welfare improvements that channel investment and conservation efforts, not as a barrier to be overcome;
 - knowledge-based information technologies are an integral part of the conditions for viable development in a globalized economy; and
 - the participation of all sections of the community should be an additional positive element that supports the region's efforts to integrate and develop.

This enlarged area would enable the region to build a platform from which to integrate and compete with the rest of the world, by exploiting the region's strengths, resources, common identity and shared vision of unity, peace and democracy.

- 5.5 The importance of improving and expanding the region's basic infrastructure -so that the continent can realize its potential for cooperation, integration, and shared and sustainable development- forms part of this broad conception of integration and development hubs. The efficient management of infrastructure and its proper expansion to satisfy growing demand

leads to reasonably priced modern public services that increase the competitiveness of the region's products and improve the population's quality of life.

- 5.6 Physical infrastructure -defined as a structural underpinning of the economic and social area in terms of a vision of regional development and integration hubs- can serve as a platform for collective growth and for a regional integration that is not only commercial and economic, but also social and cultural. Physical infrastructure, a traditional bottleneck for integration, should accelerate and multiply the process. As shown by the region's recent experience, this requires that public and private efforts to effect sustainable projects be matched by real political will.
- 5.7 To promote the realization of this strategic vision, the governments of the region should efficiently fulfil the central function assigned to them in this new phase - that is, to become the guarantors of macroeconomic stability, and of the rationality and continuity of the rules of the game, and to give credibility and support to judicial security irrespective of changes in political and economic conditions. Governments should become stronger in order to better perform their role in formulating policies and projects, professionally regulate and oversee public services, ensure the dissemination of information technologies and, in particular, introduce mechanisms to facilitate access to services on the part of the disadvantaged sectors of South American societies. The governments of the region should adopt policies that ensure the continuity and efficiency of efforts to harmonize the regulations of the various countries, and to eliminate the remaining regulatory and institutional barriers.
- 5.8 In this vision of regional integration, the state's main role is to create conditions that are conducive to action by economic and social agents, to promote and support initiatives for economic infrastructure development, and to guarantee normative and institutional rationality and efficiency. This is the main way in which governments can help ensure that resources are available for improving and expanding physical infrastructure, that demand is efficiently met, and that services are extended to the whole of society.
- 5.9 On the basis of the strategic vision of large regional integration and development hubs, the physical, regulatory and institutional requirements of basic infrastructure in South America in the present decade must be identified. This long-term effort requires political and technical continuity, and should be based on a set of basic principles and shared ideas that facilitate coordination and consensus-building among governments.
- 5.10 These basic principles, asserted in the context of the consolidation of macroeconomic stability and structural reform, are a logical outcome of the aforementioned strategic vision and draw on the main lessons of South America's recent experience in infrastructural reform.
- 5.11 The proposed basic principles are:
 - To design a more integral vision of infrastructure that includes all its components and synergies.

The vision of integration infrastructure cannot only cover transport, energy and telecommunications, but must also include the inter-relationship with social, environmental and knowledge-based information technology infrastructure. This will enable the region to exploit the synergy between different types of facilities.

- To frame the projects within a strategic planning process founded on the identification of South America's regional integration and development hubs.

This will seek to improve the efficiency of investment by coordinating the various countries' projects, based on a strategic vision of integration that gives priority to activities in the large regional integration and development hubs.

- To reform and modernize the regulatory and institutional systems that govern the use of national infrastructure.

Greater emphasis should be placed on regulatory and institutional issues that often prevent the adequate use of existing infrastructure, especially at border crossings. Progress should be made on harmonizing regulations in order to induce new investment and optimize the use of current financing, and to further the modernization of public agencies, their procedures, technologies and human resources.

- To strengthen the capacity of governments to formulate policies, plans and regulatory frameworks.

To this end, governments should be efficient in policymaking, in drawing up reference plans for the activity of private and public agents, in promoting and protecting competition, in introducing regulation based on technical and economic criteria, and in preparing and disseminating relevant information. Efforts should also be made to reduce the distortions in the various markets spawned by regulations, legal monopolies, quotas, taxes, subsidies and discretionary price and tariff-fixing.

- To harmonize policies, plans and regulatory and institutional frameworks among governments.

With a view to meeting the goals of regional integration, efforts should be made to harmonize the criteria for the design of regional infrastructure projects, as well as for the integrated assessment of them in technical, economic and environmental terms. The aim is to ensure their sustainability and minimize the risks of discretionality in selecting and supporting them. Mechanisms should also be created to strengthen synergies between complementary integration projects, and to ensure that a choice between alternative projects is made on the projects' merits.

- To take careful account of the environmental and social dimension of projects.

South American countries should adopt a stronger proactive approach to gauging the environmental and social impact of infrastructure projects, establishing their own

criteria and shared norms, and coordinating their activities. Building on their wealth of experience in designing national and regional infrastructure projects, the countries will take account of environmental implications from the moment the projects are conceived. This should be viewed as an opportunity to enrich the projects and exploit them fully, not simply as a way of mitigating their undesirable effects.

- To ensure that regional integration projects improve the quality of life and the opportunities of local populations.

Infrastructure projects should seek to have as many local development effects as possible, and should avoid becoming simple channels between the main markets.

- To build mechanisms for participation and consensus.

In devising and choosing projects, mechanisms should be set up that promote the active participation and contribution of the communities involved, as well as of private sector actors interested in financing, constructing and operating the projects.

- To develop new regional mechanisms for programming, implementing and managing physical integration projects.

On the basis of existing institutions and the experiences of the last decade, mechanisms will be set up to develop the management and shared financing of integration projects. A clear expression of the political will of South American presidents to support future action in this area is the Brasilia Communiqué, through which they asked the IDB, the CAF and FONPLATA to design and implement mechanisms to complement and support the Action Plan.

- To optimize the use of financing sources through the development of joint strategies.

Governments and multilateral financial institutions should seek innovative solutions to encourage private capital financing through common strategies and through creative solutions and instruments. Such strategies and solutions should be mindful of the nature and preferences of the capital markets, should heed project financing that offers business opportunities, and should ensure a proper distribution of the risks and benefits between the public sector and private participants.

The Role of the IDB

The Regional Infrastructure Integration Initiative in South America represents a new opportunity and challenge for re-affirming the on-going commitment of the Inter-American Development Bank in this area. Since its creation 40 years ago, the Bank has supported physical, economic and social integration, accounting for almost half of the \$250 billion it has invested in projects. IDB loans are important in themselves, but they also leverage much greater sums that help meet the full cost of the projects. Illustrative of

the IDB's role as a catalyst is the fact that for each dollar lent by the Bank for private infrastructure projects, other sources disburse five dollars to finance those same projects.

The IDB has also given financial and technical support to investment projects that have become major milestones in the region's physical integration. The Bank has made a significant contribution to the development of links between the main national road corridors, the inter-connection of electrical systems, and the creation of a regional gas pipeline network.

In addition, through its support for structural economic reform in South America, the IDB has helped nurture the conditions that today place the region on a better footing to confront the challenges of physical infrastructure development. This support is not only financial, since the Bank also provides extensive technical assistance. In South America, this technical support provided by IDB has helped countries to implement regulatory and institutional reform in the infrastructure sector, and to prepare specific physical integration projects.

The IDB's commitment is evident in this current phase of regional infrastructure integration, which poses new challenges and prompts the need for new approaches and instruments. The Bank's support for private sector infrastructure projects is having a marked impact, and is helping to support more complex projects. The IDB is also strongly promoting the harmonization of norms and institutional coordination. It is felt that with such initiatives, notable advances can be made in reducing barriers to integration in South America. The question of infrastructure at a regional level clearly needs to be addressed in a new way in light of the momentum that this new initiative and its follow-up can generate.

The IDB has always supported and will continue to support the efforts of South American countries to develop their infrastructure, especially that linked to regional integration. The IDB has been, is, and will continue to be the "Integration Bank", the issue being one of the central themes of its activities and experience. This vocation is reflected, among other areas, in the work of the Institute for the Integration of Latin America and the Caribbean (INTAL) over the last 35 years.

It is also important to note that the Bank has identified regional integration as one of its four strategic objectives for the next decade, along with the promotion of competitiveness and sustainable growth, poverty reduction, and support for governance.

The IDB is seeking to complement its direct financial support with the creation of the necessary conditions to attract the largest possible volume of private sector investment and financing, particularly in the following areas of activity:

- The design of integrated initiatives for the development of regional infrastructure based first and foremost on the identification of "integration and development corridors" throughout the continent.

- The establishment of coordination programs for regulatory systems in the areas of energy, transport and telecommunications, with a view to creating a common space for investment.
- The organization of consultation mechanisms between countries in order to harmonize regional regulations oriented toward the incorporation of environmental protection and social participation criteria in infrastructure projects.
- Support to programs to identify new mechanisms of financing, exploring the application of national financial instruments, as well as regional and international innovations, which may contribute to financial institutions that operate in the area.
- Support for studies on the factors that inhibit communications across the borders between countries with a view to promoting agreements to improve the situation.

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**STATISTICAL
ANNEX**

INTERNATIONAL TRADE OF SOUTHAMERICAN COUNTRIES

YEAR 1980

FOB EXPORTS IN MILLIONS USA DOLLARS

	ARG	BOL	BRAZIL	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	133.4	765.0	217.6	39.0	17.5	189.0	116.5	182.1	65.0	0.4	0.1	1,725.6	6,293.5	8,019.1
BOLIVIA	245.0	-	36.1	42.4	9.9	1.6	...	26.4	0.7	4.6	...	...	366.7	669.5	1,036.2
BRAZIL	1,091.2	180.2	-	450.0	135.6	50.1	408.7	130.1	310.4	230.0	7.4	12.1	3,005.8	17,073.7	20,079.5
CHILE	278.0	26.8	459.1	-	74.9	17.7	6.2	72.0	27.1	69.6	...	...	1,031.4	3,635.5	4,666.9
COLOMBIA	68.7	2.2	8.8	64.3	-	77.1	0.5	29.2	0.9	278.9	0.2	1.6	532.4	3,408.3	3,940.7
ECUADOR	31.0	0.6	34.7	220.4	93.3	-	0.3	12.4	1.6	40.9	...	...	435.2	2,045.6	2,480.8
PARAGUAY	74.2	0.6	40.2	11.3	0.1	...	-	...	10.2	...	...	...	136.6	173.6	310.2
PERU	45.2	79.3	113.5	57.7	60.5	85.9	0.4	-	9.7	52.6	...	0.3	505.1	2,907.8	3,412.9
URUGUAY	142.3	1.7	191.0	23.3	3.6	0.8	14.6	8.0	-	3.0	...	...	388.3	669.8	1,058.1
VENEZUELA	54.4	0.1	673.7	266.2	286.1	17.9	...	30.7	81.1	-	0.5	0.3	1,411.0	17,844.4	19,255.4
GUYANA	1.6	...	2.7	0.5	0.7	0.1	...	0.7	...	21.5	-	0.2	28.0	360.5	388.5
SURINAME	...	...	11.4	...	...	...	...	...	...	31.7	0.3	-	43.4	406.5	449.9
SOUTH AMERICA	2,031.6	424.9	2,336.2	1,353.7	703.7	268.7	619.7	426.0	623.8	797.8	8.8	14.6	9,609.5	55,488.7	65,098.2
REST OF THE WORLD	8,990.4	412.1	21,404.8	3,674.3	4,058.3	1,949.3	428.3	2,620.0	1,080.2	9,449.2	324.2	445.4	54,836.5		
TOTAL	11,022.0	837.0	23,741.0	5,028.0	4,762.0	2,218.0	1,048.0	3,046.0	1,704.0	10,247.0	333.0	460.0	64,446.0		

Source: ECLAC

INTERNATIONAL TRADE OF SOUTHAMERICAN COUNTRIES

YEAR 1985

FOB EXPORTS IN MILLIONS USA DOLLARS

	ARG	BOL	BRAZIL	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	69.2	496.3	111.0	132.7	14.6	72.2	162.0	99.0	72.8	...	0.1	1,229.9	7,166.0	8,395.9
BOLIVIA	375.9	-	4.5	5.6	4.1	0.1	...	12.6	...	...	...	...	402.8	270.0	672.8
BRAZIL	548.2	170.8	-	238.2	103.1	119.3	301.7	91.8	140.3	295.1	6.7	15.4	2,030.6	23,607.6	25,638.2
CHILE	84.5	14.3	207.9	-	44.7	34.5	5.8	45.7	12.3	33.6	...	...	483.3	3,279.9	3,763.2
COLOMBIA	36.6	0.7	6.0	20.9	-	56.3	0.1	31.9	0.3	129.0	...	3.1	284.9	3,267.0	3,551.9
ECUADOR	8.7	0.1	2.5	45.6	65.2	-	0.1	5.9	0.1	2.6	...	...	130.8	2,773.9	2,904.7
PARAGUAY	15.7	0.3	60.1	13.1	0.9	...	-	0.6	6.4	0.2	...	...	97.3	206.6	303.9
PERU	32.5	13.2	52.3	51.7	76.8	68.5	...	-	2.4	41.3	...	...	338.7	2,556.7	2,895.4
URUGUAY	63.1	1.0	143.4	4.0	6.7	1.4	6.1	1.8	-	3.7	...	...	231.2	621.5	852.7
VENEZUELA	1.7	0.7	253.9	248.8	121.2	5.6	0.2	46.8	2.9	-	3.4	4.6	689.8	15,332.9	16,022.7
GUYANA	...	...	1.3	0.3	0.8	0.1	...	0.2	...	7.4	-	0.2	10.3	199.6	209.9
SURINAME	...	...	19.8	...	...	...	...	...	...	33.0	0.1	-	52.9	275.8	328.7
SOUTH AMERICA	1,166.9	270.3	1,248.0	739.2	556.2	300.4	386.2	399.3	263.7	618.7	10.2	23.4	5,982.5	59,557.5	65,540.0
REST OF THE WORLD	2,646.1	270.7	12,786.0	1,901.8	3,338.8	1,464.6	273.8	1,225.7	496.3	6,283.3	239.8	269.6	31,196.5		
TOTAL	3,813.0	541.0	14,034.0	2,641.0	3,895.0	1,765.0	660.0	1,625.0	760.0	6,902.0	250.0	293.0	37,179.0		

Source: ECLAC

INTERNATIONAL TRADE OF SOUTHAMERICAN COUNTRIES

YEAR 1990

FOB EXPORTS IN MILLIONS USA DOLLARS

	ARG	BOL	BRA	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	65.7	1,422.7	462.3	73.3	42.2	147.4	186.9	262.6	143.6	0.1	0.3	2,807.1	9,545.2	12,352.3
BOLIVIA	236.4	-	78.0	33.8	4.0	0.1	1.1	53.0	3.2	2.8	...	...	412.4	510.5	922.9
BRAZIL	645.1	181.9	-	483.7	162.6	126.0	380.5	146.2	294.6	267.6	2.4	16.8	2,707.4	28,704.1	31,411.5
CHILE	113.1	73.2	492.1	-	80.3	41.6	24.0	74.3	27.0	35.6	0.1	...	961.3	7,560.5	8,521.8
COLOMBIA	27.3	5.2	30.0	164.0	-	74.5	0.3	89.3	16.6	203.7	...	2.1	613.0	6,152.0	6,765.0
ECUADOR	9.7	0.4	6.4	77.6	32.2	-	0.3	138.4	0.1	17.5	...	0.1	282.7	2,431.7	2,714.4
PARAGUAY	55.5	4.2	312.3	30.0	1.2	...	-	3.8	11.6	6.1	...	...	424.7	534.0	958.7
PERU	11.6	34.3	105.8	56.8	94.1	28.1	0.4	-	2.8	57.6	...	...	391.5	2,921.1	3,312.6
URUGUAY	82.2	1.8	506.3	16.6	12.4	0.9	6.5	8.6	-	1.7	...	0.1	637.1	1,071.3	1,708.4
VENEZUELA	29.2	0.6	304.1	138.7	363.6	28.8	0.9	36.3	4.8	-	2.2	2.3	911.5	16,205.3	17,116.8
GUYANA	...	...	1.0	0.4	0.5	0.1	...	0.2	...	4.5	-	2.0	8.7	223.1	231.8
SURINAME	...	...	22.7	...	...	...	...	...	...	...	0.1	-	22.8	445.9	468.7
SOUTH AMERICA	1,210.1	367.3	3,281.4	1,463.9	824.2	342.3	561.4	737.0	623.3	740.7	4.9	23.7	10,180.2	76,304.7	86,484.9
REST OF THE WORLD	3,762.9	403.7	18,143.6	5,358.1	4,328.8	1,575.7	1,117.6	1,692.0	748.7	6,634.3	217.1	395.3	44,377.8		
TOTAL	4,973.0	771.0	21,425.0	6,822.0	5,153.0	1,918.0	1,679.0	2,429.0	1,372.0	7,375.0	222.0	419.0	54,558.0		

Source: ECLAC

INTERNATIONAL TRADE OF SOUTHAMERICAN COUNTRIES

YEAR 1995

FOB EXPORTS IN MILLIONS USA DOLLARS

	ARG	BOL	BRA	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	254.0	5,484.1	1,475.1	233.4	86.3	631.4	275.6	662.9	377.7	...	2.1	9,482.6	11,479.7	20,962.3
BOLIVIA	142.7	-	23.4	25.8	64.4	7.3	5.0	144.4	2.0	5.7	...	...	420.7	760.5	1,181.2
BRAZIL	4,041.1	530.0	-	1,210.5	457.2	208.5	1,300.7	438.3	811.1	480.9	12.1	15.7	9,506.1	36,998.0	46,504.1
CHILE	584.1	196.9	1,063.9	-	188.4	124.2	75.9	432.3	56.3	135.1	0.3	...	2,857.4	13,043.5	15,900.9
COLOMBIA	63.1	24.7	136.5	165.5	-	423.3	3.2	566.9	9.0	962.4	1.4	2.7	2,358.7	7,958.3	10,317.0
ECUADOR	89.9	3.8	54.0	194.4	251.9	-	1.6	69.2	8.4	34.1	...	...	707.3	3,654.1	4,361.4
PARAGUAY	83.3	3.6	410.8	31.0	6.9	1.0	-	3.2	34.0	21.6	...	...	595.4	323.9	919.3
PERU	30.8	76.9	199.9	152.1	118.2	46.8	1.2	-	3.2	163.2	0.1	...	792.4	4,647.1	5,439.5
URUGUAY	267.1	2.1	700.1	39.9	18.3	1.3	24.9	36.8	-	11.0	...	0.2	1,101.7	1,004.5	2,106.2
VENEZUELA	36.0	8.8	1,683.9	138.7	1,423.2	215.2	1.2	239.4	16.9	-	7.7	389.0	4,160.0	14,754.1	18,914.1
GUYANA	...	...	9.6	0.6	1.4	0.1	...	...	...	...	-	...	11.7	489.3	501.0
SURINAME	...	...	25.0	...	...	...	...	...	...	...	...	-	25.0	510.0	535.0
SOUTH AMERICA	5,338.1	1,100.8	9,791.2	3,433.6	2,763.3	1,114.0	2,045.1	2,206.1	1,603.8	2,191.7	21.6	409.7	32,019.0	95,623.0	127,642.0
REST OF THE															
WORLD	13,415.9	1,020.2	40,186.8	11,631.4	9,747.7	3,255.0	2,370.9	4,565.9	1,774.2	9,226.3	356.4	1,030.3	98,581.0		
TOTAL	18,754.0	2,121.0	49,978.0	15,065.0	12,511.0	4,369.0	4,416.0	6,772.0	3,378.0	11,418.0	378.0	1,440.0	130,600.0		

Source: ECLAC

INTERNATIONAL TRADE OF SOUTHAMERICAN COUNTRIES
YEAR 1998
 FOB EXPORTS IN MILLIONS USA DOLLARS

	ARG	BOL	BRA	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	405.8	7,664.2	1,679.0	183.4	119.1	599.0	314.4	824.5	351.5	0.2	1.4	12,142.5	13,179.5	25,322.0
BOLIVIA	141.3	-	30.1	34.2	86.5	80.2	1.9	140.5	50.1	11.4	...	...	576.2	747.0	1,323.2
BRAZIL	6,747.1	675.8	-	1,023.0	467.7	203.6	1,249.4	368.7	880.5	706.3	6.0	12.0	12,340.1	38,778.6	51,118.7
CHILE	734.5	247.0	828.0	-	210.3	194.3	60.1	362.1	56.2	176.3	0.3	0.5	2,869.6	11,971.7	14,841.3
COLOMBIA	86.3	46.3	99.8	159.4	-	573.9	5.4	369.8	8.1	1,145.3	1.6	4.3	2,500.2	8,320.8	10,821.0
ECUADOR	76.6	7.0	33.4	139.8	282.6	-	1.4	199.1	31.1	59.3	...	...	830.3	3,372.7	4,203.0
PARAGUAY	152.7	4.9	349.3	40.0	2.9	0.3	-	9.2	28.7	8.5	...	...	596.5	417.6	1,014.1
PERU	28.4	115.5	180.3	138.5	143.4	106.4	1.5	-	4.7	108.0	...	0.2	826.9	4,844.6	5,671.5
URUGUAY	513.6	3.7	935.1	73.4	13.4	15.9	83.8	33.0	-	27.7	...	0.4	1,700.0	1,069.6	2,769.6
VENEZUELA	54.3	5.1	661.0	191.8	1,432.5	221.2	4.8	298.9	17.4	-	12.1	6.2	2,905.3	13,951.7	16,857.0
GUYANA	...	...	...	...	4.3	...	...	0.3	...	...	-	...	4.6	570.3	574.9
SURINAME	...	...	1.3	...	...	0.4	...	...	...	0.1	4.7	-	6.5	429.5	436.0
SOUTH AMERICA	8,534.8	1,511.1	10,782.5	3,479.1	2,827.0	1,515.3	2,007.3	2,096.0	1,901.3	2,594.4	24.9	25.0	37,298.7	97,653.6	134,952.3
REST OF THE															
WORLD	19,735.2	898.9	47,947.5	13,610.9	10,853.0	3,534.7	1,822.7	4,904.0	2,228.7	12,295.6	505.1	501.0	118,837.3		
TOTAL	28,270.0	2,410.0	58,730.0	17,090.0	13,680.0	5,050.0	3,830.0	7,000.0	4,130.0	14,890.0	530.0	526.0	156,136.0		

Source: ECLAC

AIR PASSENGER TRANSPORT AMONG SOUTHAMERICAN COUNTRIES
Travels per section among countries-Year 1999

	ARG	BOL	BRA	COL	CHI	ECU	GUY	PAR	PER	URU	VEN
ARG	0	160559	573698	35144	837097	5857	0	109675	68703	1530052	29932
BOL	167729	0	106846	7798	92805	56	0	27523	71761	20928	12799
BRA	1266803	168385	0	32778	249157	14034	7194	123661	58099	307484	76981
COL	40650	10166	13727	0	40013	30877	53	115	82469	0	192944
CHI	852325	99820	121758	25654	0	20686	153	49936	238151	83744	31608
ECU	12899	126	6797	124784	41791	0	0	0	66048	0	52531
GUY	0	0	4609	0	0	0	0	0	0	0	0
PAR	123430	24674	54188	63	51352	0		0	202	22531	188
PER	88660	59226	28068	74385	239252	28395	0	518	0	7513	91506
URU	1514571	24993	304661	0	80374	0	0	22837	7315	0	0
VEN	32522	12742	41826	157679	28148	17350	0	214	92641	0	0

TELECOMMUNICATIONS AMONG SOUTHAMERICAN COUNTRIES
YEAR 1998

Outgoing telecommunications traffic – Millions of Minutes

	ARG	BOL	BRA	CHILE	COLOM	ECUAD	PARAG	PERU	URUG	VENEZ	GUYA	SURINA	SOUTH AMERICA	REST OF WORLD	TOTAL
ARGENTINA	-	22.0	41.4	30.7	3.4	n/a	23.3	24.7	45.6	3.6	n/a	n/a	194.7	164.0	358.7
BOLIVIA	5.3	-	3.6	3.2	1.0	1.4	0.4	3.7	0.2	0.4	n/a	n/a	19.2	12.4	31.6
BRAZIL	41.8	6.1	-	9.6	4.7	n/a	10.4	2.7	11.6	2.5	n/a	n/a	89.4	456.4	545.8
CHILE	26.9	5.2	9.6	-	2.1	3.4	1.4	10.3	1.8	3.4	n/a	n/a	64.1	194.9	259.0
COLOMBIA	<i>3.4</i>	<i>1.0</i>	<i>4.7</i>	<i>2.1</i>	-	n/a	n/a	<i>3.8</i>	<i>0.4</i>	<i>15.8</i>	n/a	n/a	31.2	168.8	<i>200.0</i>
ECUADOR	n/a	<i>1.4</i>	n/a	<i>3.4</i>	n/a	-	n/a	<i>2.0</i>	n/a	<i>2.6</i>	n/a	n/a	9.4	40.6	<i>50.0</i>
PARAGUAY	12.0	0.5	8.6	1.3	n/a	n/a	-	0.4	1.5	n/a	n/a	n/a	24.3	13.5	37.8
PERU	6.9	2.8	2.7	7.0	3.8	2.0	vr	-	n/a	2.9	n/a	n/a	28.1	62.3	90.4
URUGUAY	40.6	0.3	10.5	2.0	0.4	n/a	1.7	0.5	-	0.7	n/a	n/a	56.7	21.6	78.3
VENEZUELA	3.0	0.4	2.5	1.8	15.8	2.6	n/a	4.1	n/a	-	n/a	n/a	30.2	134.3	164.5
GUYANA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	n/a	0.0	n/a	n/a
SURINAME	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	0.0	n/a	n/a
SOUTH AMERICA	139.9	39.7	83.6	61.1	31.2	9.4	37.2	52.2	61.1	31.9	0.0	0.0	547.3	1,268.8	1,816.1

Amounts in italics: estimated

n/a: Information not available

Source: TeleGeography